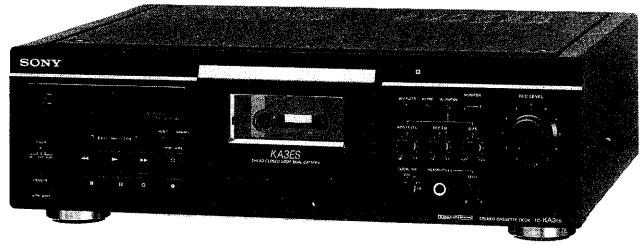
TC-KA3ES

SERVICE MANUAL

US Model
Canadian Model
E Model



Model Name Using Similar Mechanism	TC-K222ESJ
Tape Transport Mechanism Type	TCM-200D15

SPECIFICATIONS

System

Recording system
4-track 2-channel stereo

Fast winding time (approx.)
90 sec. (with Sony C-60 cassette)

Bias
AC bias

Heads

Erasing	S&F
Recording	LA
Playing	LA

Motors
Capstan motor × 1 (direct drive linear torque BSL motor)
Reel motor × 1 (DC motor)
Assist (mechanism drive) motor × 1 (DC motor)

Signal-to-noise ratio (at peak level, weighted, and with Dolby NR off)
Type I tape, Sony Type I (NORMAL): 57 dB
Type II tape, Sony Type II (HIGH): 59 dB
Type IV tape, Sony Type IV (METAL): 61 dB

S/N ratio improvement

Dolby NR on	Approximate values
B	5 dB at 1 kHz, 10 dB at 5 kHz
C	15 dB at 500 Hz, 20 dB at 1 kHz
S	10 dB at 100 Hz, 24 dB at 1 kHz

Harmonic distortion

Tape type	
Type I tape Sony Type I (NORMAL)	0.4% (160 nWb/m 315 Hz, 3rd H.D.)
Type IV tape Sony Type IV (METAL)	1.3% (250 nWb/m 315 Hz, 3rd H.D.)

Frequency response (Dolby NR off)

Tape type	
Type I tape Sony Type I (NORMAL)	15 - 17,000 Hz (±3 dB, IEC)
Type II tape Sony Type II (HIGH)	15 - 20,000 Hz (±3 dB, IEC)
Type IV tape Sony Type IV (METAL)	15 - 22,000 Hz (±3 dB, IEC) 15 - 16,000 Hz (±3 dB, –4dB recording)

Wow and flutter

±0.04% W. Peak (IEC)
0.022% W. RMS (NAB)
±0.065% W. Peak (DIN)

Inputs

Line inputs (phono jacks)
Sensitivity: 0.16 V
Input impedance: 47 kilohms

Outputs

Line outputs (phono jacks)
Rated output level: 0.5 V at a load impedance of 47 kilohms
Load impedance: Over 10 kilohms

Headphones (stereo phone jack)
Output level: 0 - 3 mW at a load impedance of 32 ohms

General

Power requirements

Where purchased	Power requirements
U.S.A. and Canada	120 V AC, 60 Hz
Other countries	120, 220 or 240 V AC adjustable, 50/60 Hz

Power consumption
30 W

Dimensions (approx.) (w/h/d)
430 × 135 × 360 mm (17 × 5 3/8 × 14 1/4 inches)
incl. projecting parts and controls

Mass (approx.)
7.6 kg (16 lbs 13 oz)

Supplied accessories

Audio connecting cords (2)
Remote commander RM-J701 (1)*
Sony batteries SUM-3(NS) (2)*

* Canadian model only

Design and specifications are subject to change without notice.

STEREO CASSETTE DECK

SONY®

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* Dolby noise reduction and HX Pro headroom extension manufactured under license from Dolby Laboratories Licensing Corporation. HX Pro originated by Bang & Olufsen.
"DOLBY," the double-D symbol DD and "HX PRO" are trademarks of Dolby Laboratories Licensing Corporation.

Notes on chip component replacement

- Never reuse a disconnected chip component.
- Notice that the minus side of a tantalum capacitor may be damaged by heat.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:
Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC leakage. Check leakage as described below.

LEAKAGE

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

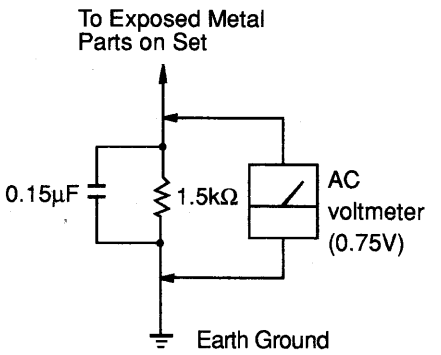


Fig. A. Using an AC voltmeter to check AC leakage.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

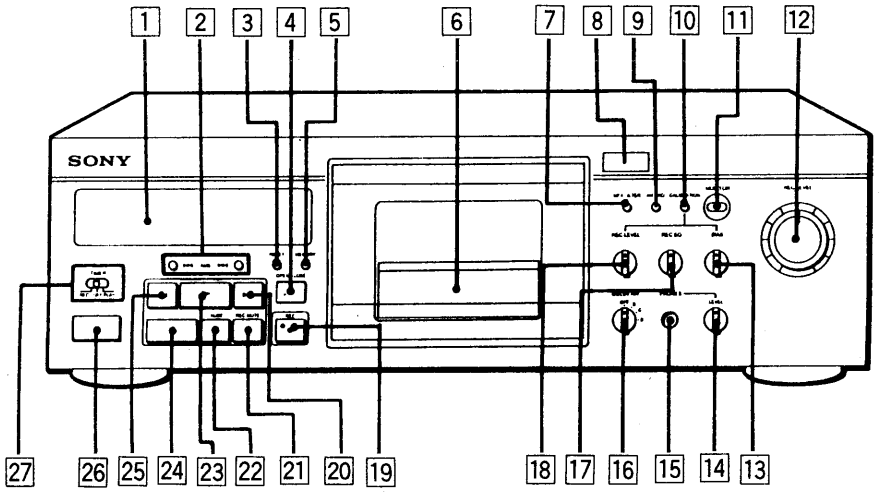
ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SECTION 1
GENERAL

Identifying the Parts

FRONT PANEL



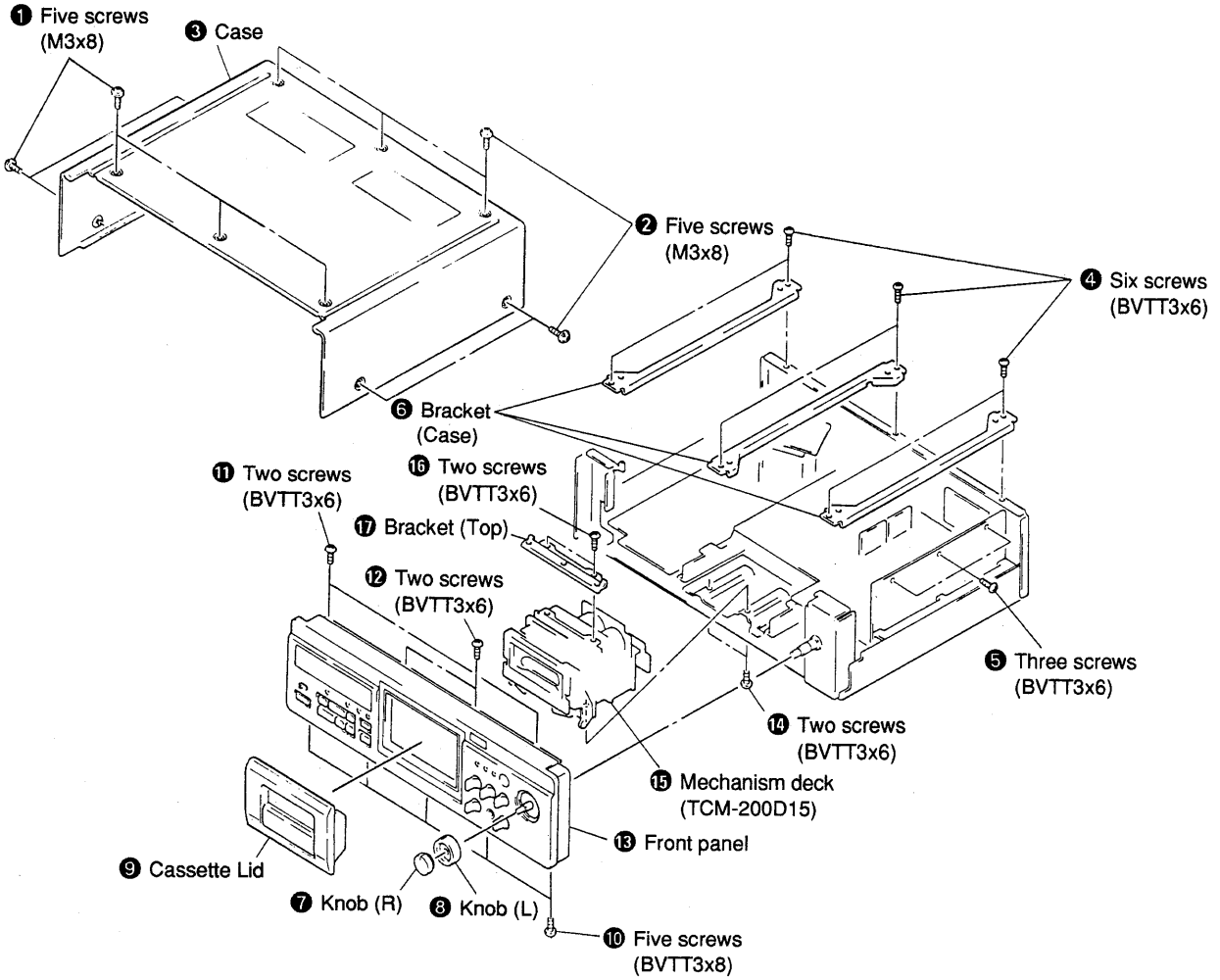
1 Level meter and Tape counter
2 ⏮/⏭ (AMS)* buttons
3 RESET button
4 ⏏ OPEN/CLOSE button
5 MEMORY button
6 Cassette holder
7 MPX (multiplex) FILTER button
8 Remote control sensor (canadian only)
9 HX PRO button
10 CALIBRATION button
11 MONITOR button
12 REC (recording) LEVEL control
13 BIAS control
14 PHONES LEVEL control
15 PHONES jack
16 DOLBY NR (noise reduction) switch
17 REC (recording) EQ (equalizer) control
18 REC (recording) LEVEL (for calibration) control
19 ● REC (recording) button
20 ▶▶ (fast-forward) button
21 O REC MUTE (record muting) button
22 ❚❚ PAUSE button
23 ▶ (play) button
24 ■ (stop) button
25 ◀◀ (rewind) button
26 POWER switch
27 TIMER switch

* AMS is the abbreviation of Automatic Music Sensor.

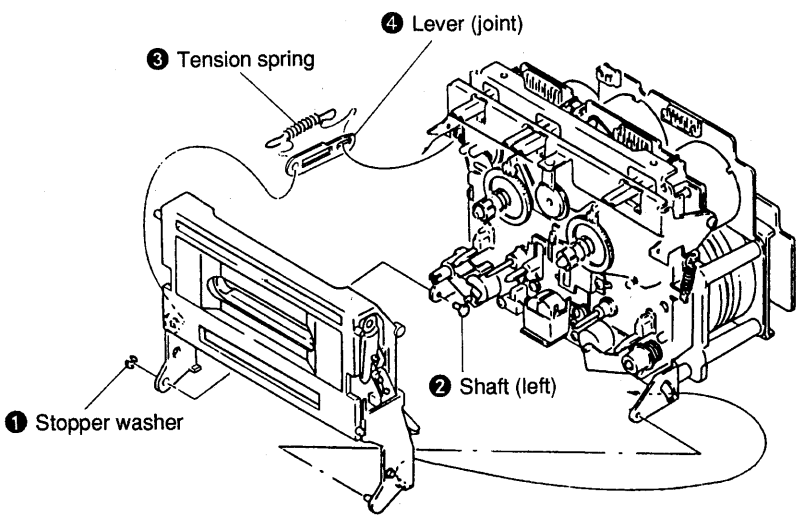
SECTION 2
DISASSEMBLY

Note : Follow the disassembly procedure in the numerical order given.

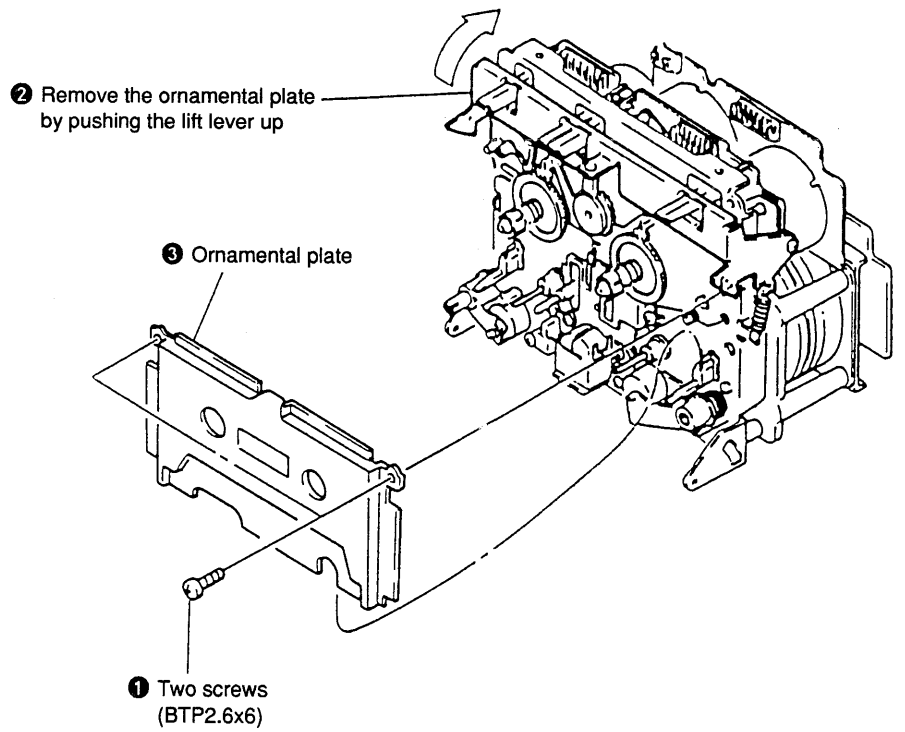
2-1. MECHANISM DECK



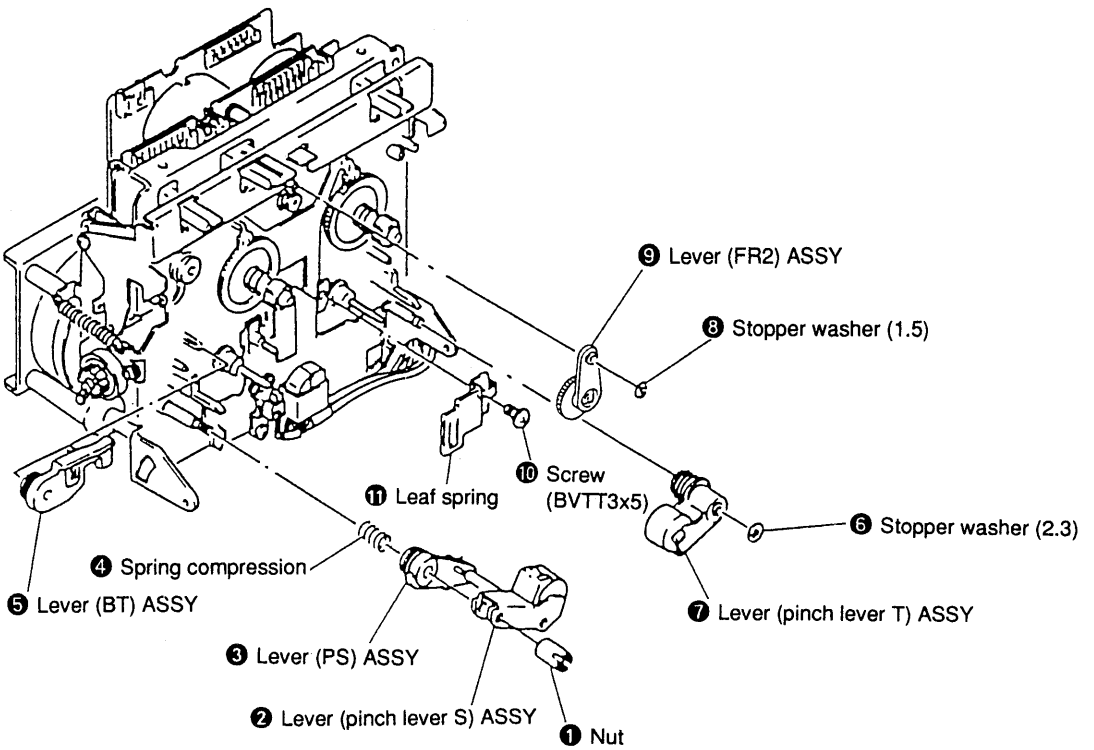
2-2. CASSETTE HOLDER



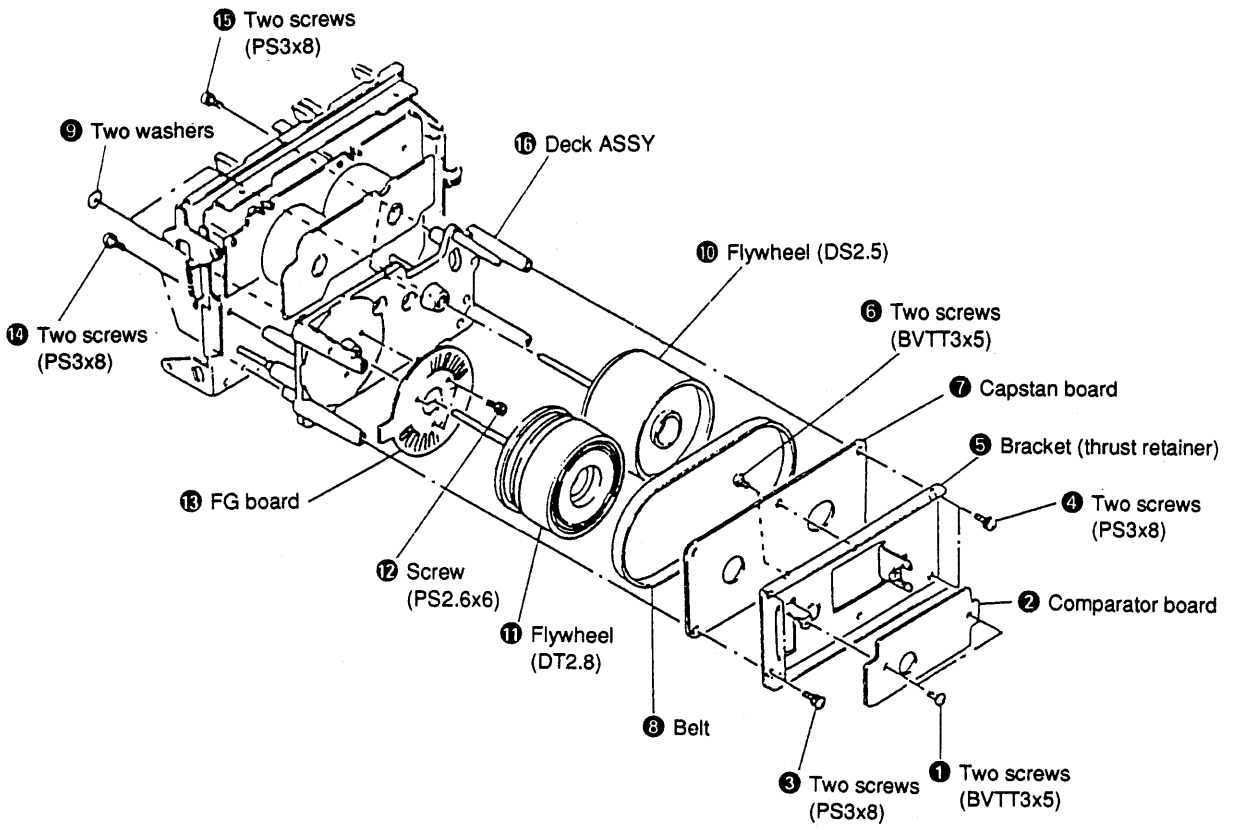
2-3. ORNAMENTAL PLATE



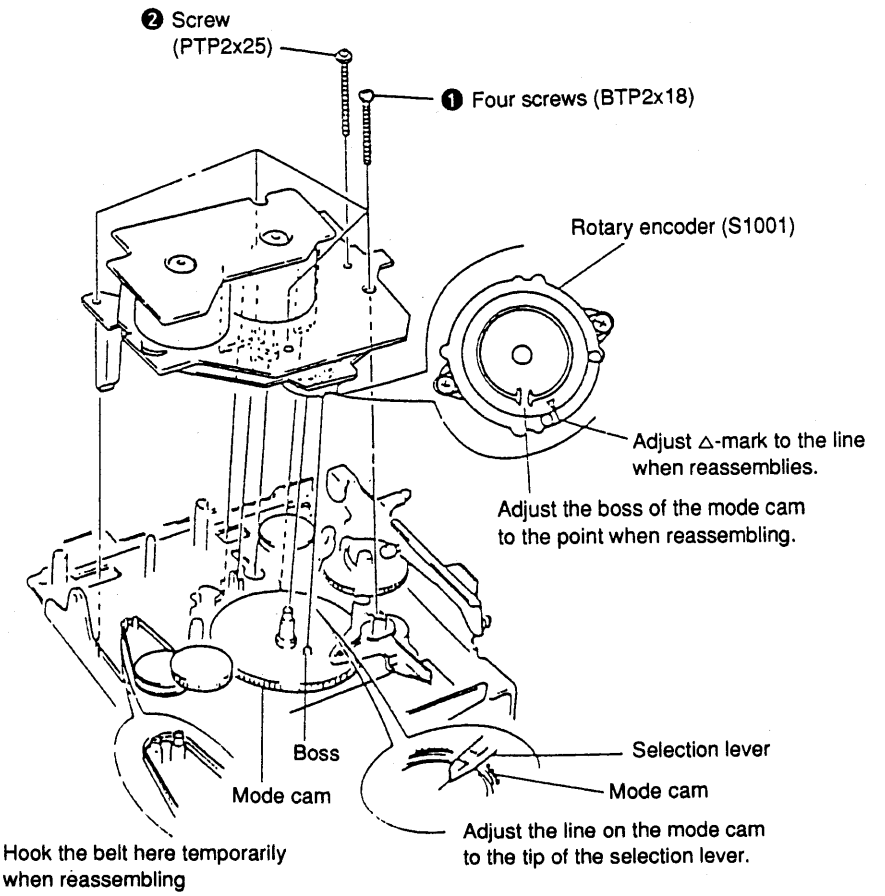
2-4. PINCH LEVER AND LEVER (FR)



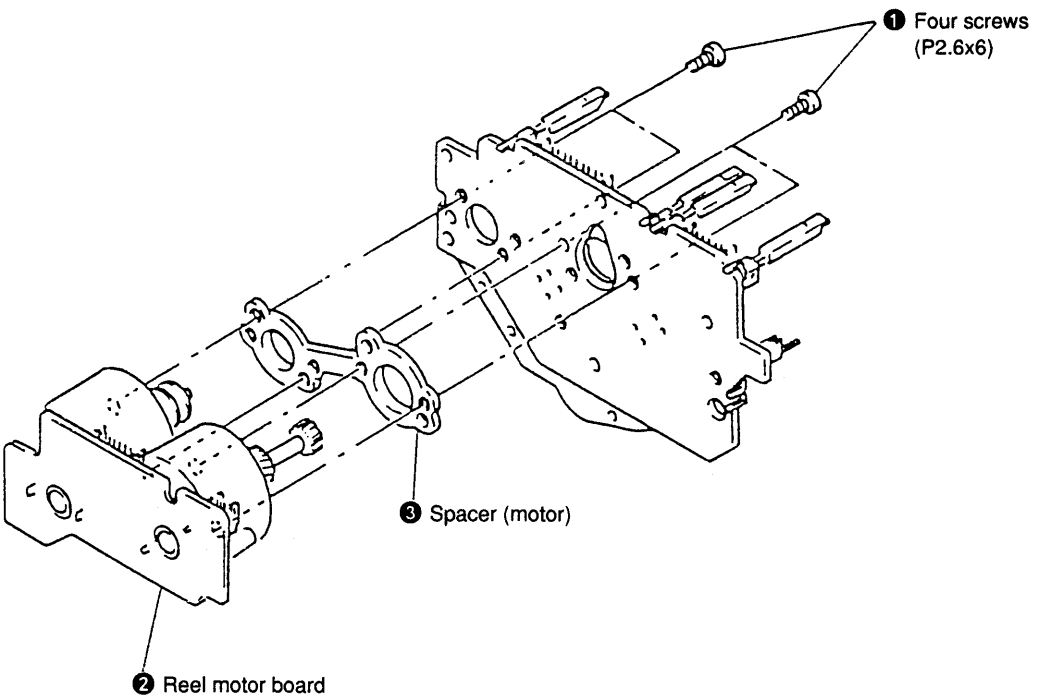
2-5. COMPARATOR BOARD, CAPSTAN BOARD AND FG BOARD



2-6. MD BOARD


❷ Screw (PTP2x25)
❶ Four screws (BTP2x18)
Rotary encoder (S1001)
Adjust △-mark to the line when reassemblies.
Adjust the boss of the mode cam to the point when reassembling.
Boss
Mode cam
Selection lever
Mode cam
Adjust the line on the mode cam to the tip of the selection lever.
Hook the belt here temporarily when reassembling

2-7. REEL MOTOR BOARD

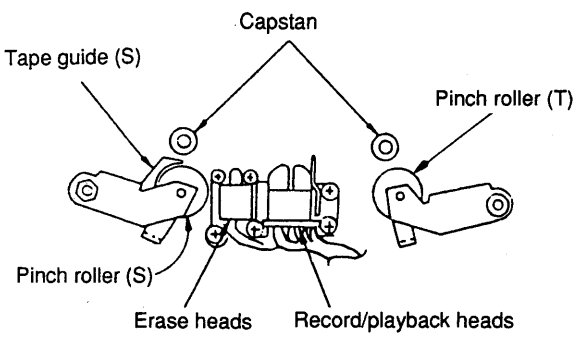


SECTION 3
MECHANICAL ADJUSTMENTS

• **Refer to page 9 for Adjustment Location.**

PRECAUTIONS

1. Clean the following parts with an alcohol-moistened swab. (tape sliding surface)



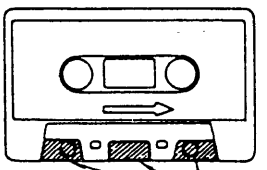
2. Demagnetize the record/playback heads, erase heads and the capstan using the head demagnetizer.
3. Do not use a magnetized screw driver for the adjustments.
4. After the adjustments, apply suitable locking compound to the parts adjusted.
5. The adjustment should be performed with the rated power supply voltage unless otherwise noted.

Tape Passing Adjustment

Note: For the following adjustments, use the jig as far as possible. Although the following methods are operable without using the jig, precise adjustment may not be completed, for example no compatibility to other decks is available even if self recording and playback is OK. In these adjustments, either the pinch roller guide in the S side or the record/playback head guide is referred to for tape pass. Therefore, do not unnecessarily rotate the adjustment screws including those of the erase heads unless any one is replaced. When 2 or more heads or pinch rollers out of these 2 heads and pinch rollers are to be adjusted or replaced, use the jig for the adjustments or replace one at first and then take complete tape pass and then replace the second one.
Head height adjusting jig: apex

Preparation:

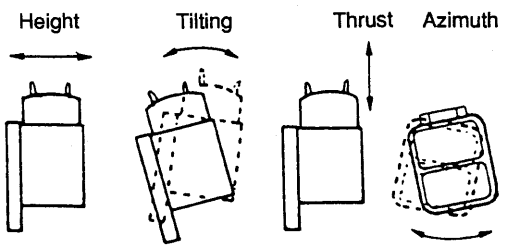
- Mirror cassette CQ009C 8-909-708-01
  (Or CQ012C 8-909-708-02)
  If it is not available, cut a part of the half of a 120 minute cassette tape and use.



- Plus screw driver
  Medium size ..... Apply to the head adjusting screw.
  Minus screw driver
  Large size..... Apply to the pinch roller adjusting screw in the S side.
- Pen light
- WS-48B (3kHz, 0dB)
- P-4-A100 (10kHz, –10dB)

Definition:

The following view relates to record/playback heads.



For the locations of the adjusting screws, see the view "adjustment location" in the lower right corner of Page 9.

Procedure:

Pinch roller in the S side

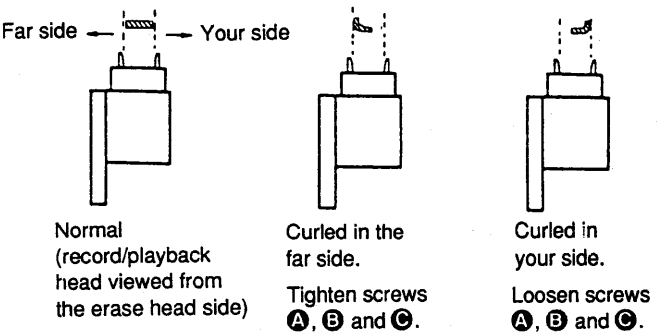
Note: It should be adjusted only when the pinch roller in the S side is replaced.

1. Mount the mirror cassette and set the equipment to playback state.
2. Check that the tape is curled in the pinch roller guide or the guide of the record/playback heads.
   If curled, remedy it by rotating the tape curl adjusting screw ⓗ. At that time, check that the tape runs near the center part of the erase heads.

Record/playback heads

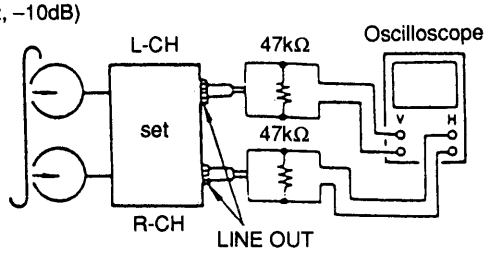
Note: The heads should be adjusted only when the record/playback head is replaced.

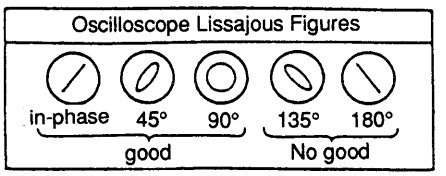
1. Mount the mirror cassette and set the equipment to playback state.
2. (Height adjustment) Check that the tape is curled in the tape guide of the heads. If curled, rotate screws Ⓐ, Ⓑ and Ⓒ in the same angle and move the entire heads parallel. Check the mirror cassette where there is curling and, when curling exists in the lower side (actually in the deep side), tighten all screws slightly. If curled in the upper (your) side, loosen them.


Far side
Your side
Normal (record/playback head viewed from the erase head side)
Curled in the far side.
Tighten screws Ⓐ, Ⓑ and Ⓒ.
Curled in your side.
Loosen screws Ⓐ, Ⓑ and Ⓒ.

3. (Adjustment of tilting) Adjust back tension to 0 still in playback state (loosen the tape by rotating the reel in the S side using a small tip such as a pencil), and check that there is no curling or snaking (up or down) in the guide of the record/playback heads. Snaking of the tape may occur only within the range of a difference in the widths of the tape and the tape guide (it curls when rate slacks more than the range). Therefore, carefully check it because it may often be overlooked.
   If the tape is snaking, rotate screws Ⓑ and Ⓒ in the same angle and change the tilting of the heads. Tighten or loosen the screws to remedy up or down snaking, respectively.
4. Repeat the adjustment 2 and 3 again and converge the height and tilting to suitable positions.
5. (Tentative adjustments of azimuth) Demagnetize and clean the heads and playback WS-48B (3kHz, 0dB).
   Rotate the screw Ⓒ so that the pointer or the level meter of the set or connected to LINE OUT becomes maximum. If the screw is rotated more than 1/2 turn, repeat the adjustments again from 1.
6. (Checking of tape pass) Connect an oscilloscope to LINE OUT, replay P-4-A100 (10kHz, –10dB) to describe Lissajous' figures.
   At about 20 seconds after beginning playback (the tension in the loop becomes stable), check that the variation of the Lissajous' figures occur within ±90° (more preferably within ±45°). If beyond ±90°, adjustments of tilting or height will not be complete, so finely adjust the equipment again from 1.

Standerd adjustment tape
P-4-A100
(10kHz, −10dB)

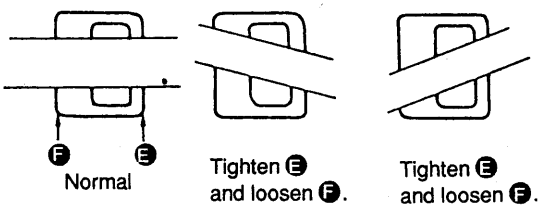




Erase heads

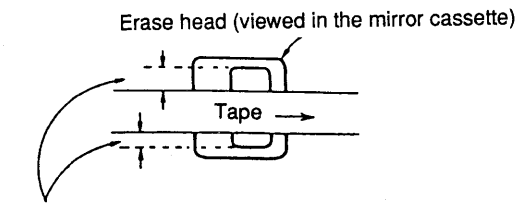
Note: The heads should be adjusted only when the erase head is replaced.

1. Mount the mirror cassette and set the equipment to playback state.
2. (Azimuth adjustments) Adjust screws Ⓔ or Ⓕ so that the tape runs as parallel to the erase heads as possible.



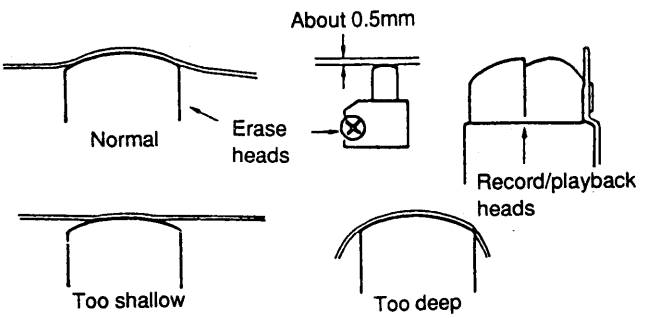
(Erase head viewed in the mirror cassette)

3. (Height adjustment) Rotate screws Ⓓ, Ⓔ and Ⓕ in the same angle so that the widths of erase heads seen in the upper and lower sides of the tape become essentially the same. If the width in the upper or lower side is larger, tighten or loosen the screws, respectively.



Adjust to the same widths.

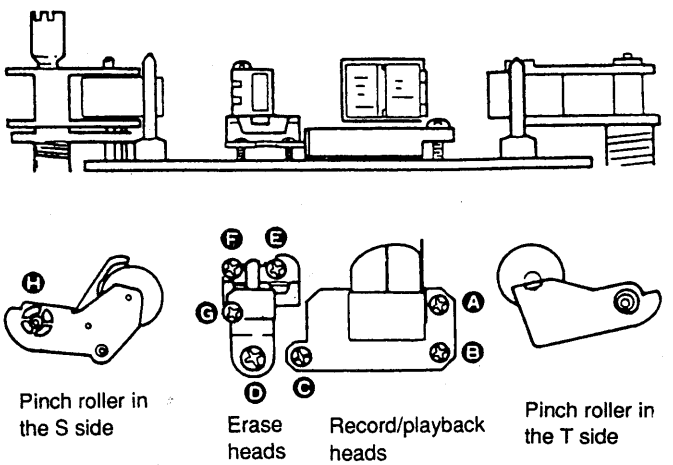
4. (Adjustments of tilting) Adjust back tension to 0 still in playback state and check that there is no snaking in the erase heads and pinch roller guide in the S side. If there is, change tilting by rotating the screw Ⓓ. When the tape moves up or down in the mirror tape, tighten or loosen the screw, respectively.
5. Repeat the adjustments again from 2. and converge the height and tilting to more suitable values. And, check that there are no tape curls in the pinch roller guide and the guide of the record/playback heads.
6. (Adjustments of thrust) Slightly loosen the screw Ⓖ and finely adjust it so that the tape smoothly runs over the entire surfaces of the heads by adjusting the thrust of the erase heads to an optimum value relalive to the tape.



Checking

1. Check that the tape smoothly runs over the entire tape pass without curling or snaking.
2. After the adjustments, apply the locking compound to the screws adjusted (apply the compound to the screw Ⓒ only after the final azimuth adjustments are completed).

Adjustment Location:
The following views relate to those in the mirror cassette (upper) and MD viewed from your side (lower).



Torque Adjustment

1. Load the torque measuring tape CQ-102C, and play back. Adjust RV801 so that the torque meter reading is 40 ± 5g • cm. (0.556 ± 0.069 oz • inch)
2. After adjustment, measure back tension and FF/REW torque, and make sure that measured data satisfies the specification.

Torque	Torque meter	Meter reading
FWD	CQ-102C	35 – 45g•cm (0.49 – 0.62 oz • inch)
FWD back tension	CQ-102C	7 – 11g•cm (0.10 – 0.15 oz • inch)
FF/REW	CQ-201B	65 – 90g•cm (0.91 – 1.25 oz • inch)

SECTION 4

ELECTRICAL ADJUSTMENTS

• Note

1. Perform adjustment in the order listed below. (As a rule, adjust the record system after adjustment of playback system has been completed.)
2. Adjust and measure both channels otherwise specified.
3. To perform simultaneous record and playback, select recording mode, and set MONITOR switch to TAPE, then play back immediately the recorded signal to take out from LINE OUT.

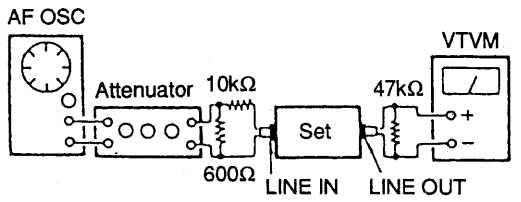
• Switch position

DOLBY NR	OFF
MPX FILTER	OFF
TIMER	OFF
MONITOR	TAPE
HX PRO	OFF
CALIBRATION	OFF
BIAS	CENTER CLICK
REC LEVEL	CENTER CLICK
REC EQ	CENTER CLICK

• Standard Record

Adjust the REC LEVEL (RV501) controls so that the I/O signal levels specified below can be attained.

Record Mode



0dB=0.775V

Standard Input Level

Input pin	LINE IN
Signal source impedance	10kΩ
Input signal level	0.5V (–3.8dB)

Standard Output Level

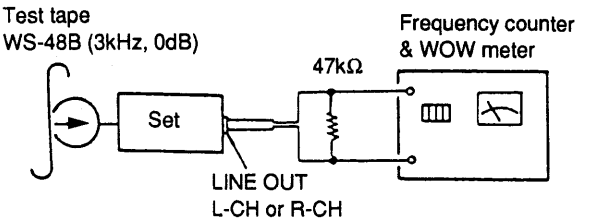
Output pin	LINE OUT
Load impedance	47kΩ
output signal level	0.5V (–3.8dB)

Test Tape

Type	Signal	Used for
WS-48B	3kHz, 0dB	Tape speed/WOW check
P-4-A100	10kHz, –10dB	Azimuth adjustment
P-4-L300	315Hz, 0dB	PB level adjustment

Tape Speed/WOW check

Procedure:



1. Play back the top of test tape to measure its output frequency and WOW value.
2. Invert test tape and perform same measurement, then check for difference between top and end of tape.

Specification :

Tape speed deviation : within 2,990 to 3,010Hz
Tape speed fluctuation : within 2,990 to 3,010Hz
WOW (WRMS) : 0.047% less

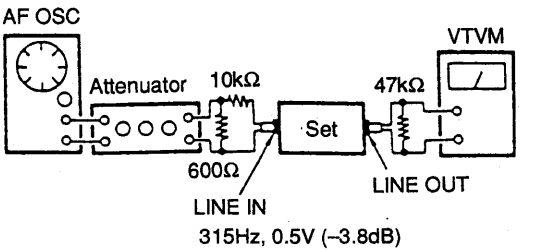
MPX Filter Check

Condition :

DOLBY NR switch : OFF
MPX FILTER switch : OFF
REC LEVEL control : Standard record
MONITOR switch : SOURCE

Procedure :

1. Mode : stop



2. Applying 19kHz, 0.5V (–3.8dB) signal, measure the LINE OUT level.

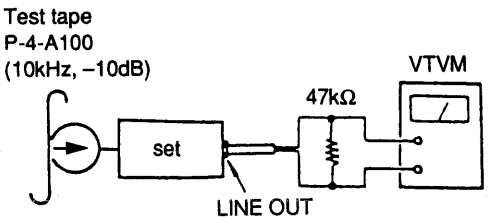
Specification :

DOLBY NR switch : Either B, C or S
MPX FILTER switch : ON, LINE OUT level must be,
315Hz : within 0.44 to 0.56V (within –4.8 to –2.8dB)
19kHz : 15.8mV (–33.8dB) or less

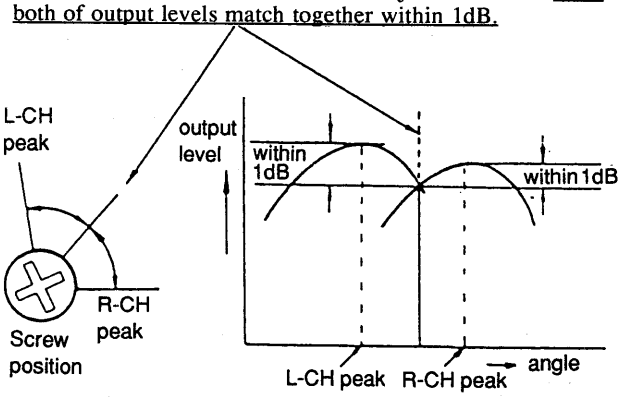
Record/Playback Head Azimuth Adjustment

Procedure :

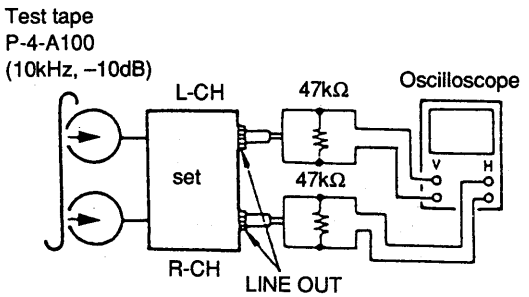
1. Mode : FWD playback



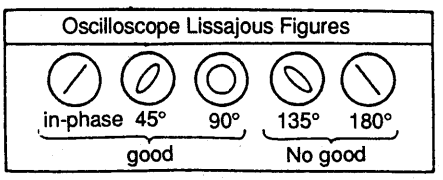
2. Turn the adjustment screw for the maximum output levels. If these levels do not match, turn the adjustment screw unitil both of output levels match together within 1dB.



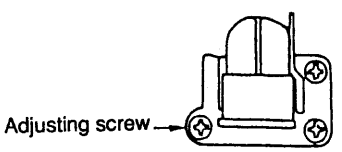
3. Phase Check
   Mode : playback



4. Confirm that the phase difference between L-CH and R-CH is in-phase to 90°.



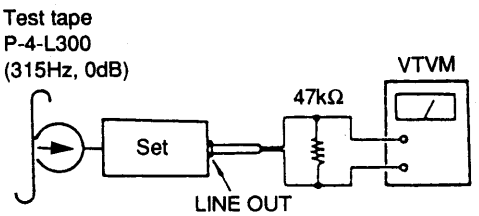
Adjustment Location :



Playback Level Adjustment

Procedure :

1. Mode : Playback



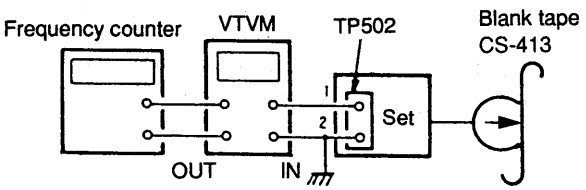
2. Adjust the RV101 (L-CH) and RV201 (R-CH) to satisfy the following specification.

Adjustment Value :
LINE OUT level : 0.3 to 0.34V (–8.2 to –7.2dB)
Level difference between channels : within 0.5dB
Confirm that the LINE OUT level does not change when playback and stop are repeated.

Erase Current Adjustment

Procedure :

1. Mode : record



2. Adjust RV506 so that VTVM reading is 110mV (erase current 110mA).
3. At this time, confirm oscillation frequency.

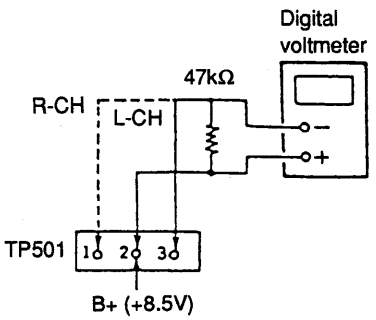
Adjustment Value :
Erase current : 110^{+0}_{-5} mA
Oscillation frequency : 160 ± 6kHz

Bias Consumption Current Adjustment

Note : The bias consumption current must be adjusted before adjusting the record bias. Retry record bias adjustment after the bias consumption current is adjusted.

Procedure :

1. Set semi-fixed resistors RV104 (L-CH), RV204 (R-CH) and RV505 for record bias adjustment to mechanical center, and select the recording mode without applying a signal.
2. Adjust T101 (L-CH) and T201 (R-CH) so that the digital voltmeter reading becomes minimum.



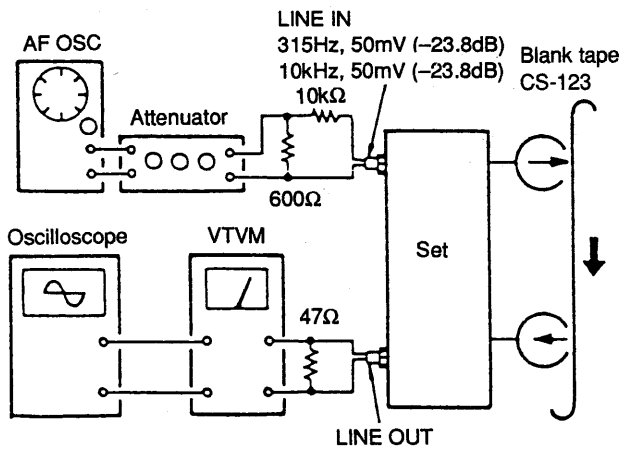
Specification : 120mV or less
(This value is measured using CS-413 after bias adjustment)

Bias and Recording level adjustment (HX PRO : ON)

Condition :
REC LEVEL control : Specified recording position (page 10)

Procedure :

1. Mode : simultaneous record and playback



2. Adjust the following controls so that the minimum output becomes the specified output level.
   (1) RV104 (L-CH) and RV204 (R-CH) ..... Bias adjustment
   (2) RV103 (L-CH) and RV203 (R-CH) ..... Recording level adjustment

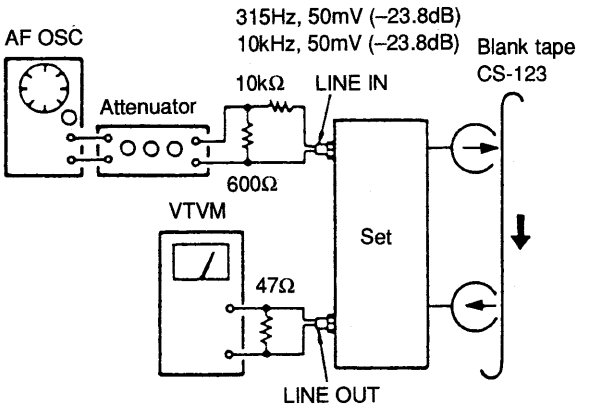
Adjustment Value :
(1) Level of 10kHz against 315Hz : 0 ± 0.3dB
(2) 315Hz level : 48.3 to 51mV (–24.1 to –23.5dB)

Bias Adjustment (HX PRO : OFF)

Condition :
REC LEVEL control : Specified recording position (page 10)
HX PRO switch : OFF

Procedure :

1. Mode : simultaneous record and playback



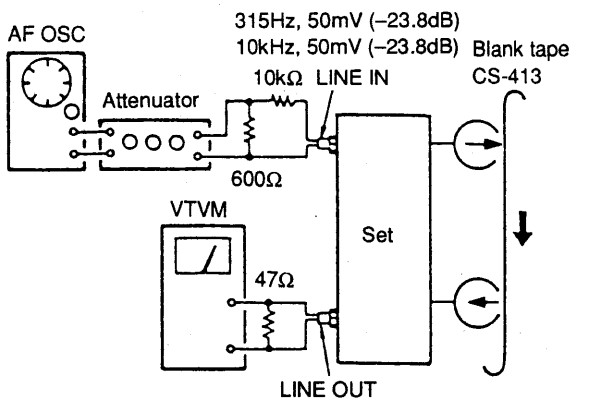
2. Adjust RV105 (L-CH) and RV205 (R-CH) so that 10kHz playback output is 0 ± 0.3dB relative to the 315Hz output.

Metal Bias Adjustment

Condition :
REC LEVEL control : Specified recording position (page 10)

Procedure :

1. Mode : simultaneous record and playback



2. Adjust RV505 so that 10kHz R-CH output is 0 ± 0.3dB relative to the 315Hz output.

Calibration Adjustment

Condition :
CALIBRATION switch : ON
TP801 : The state of short-circuit

Adjustment method (Oscillation input level) :

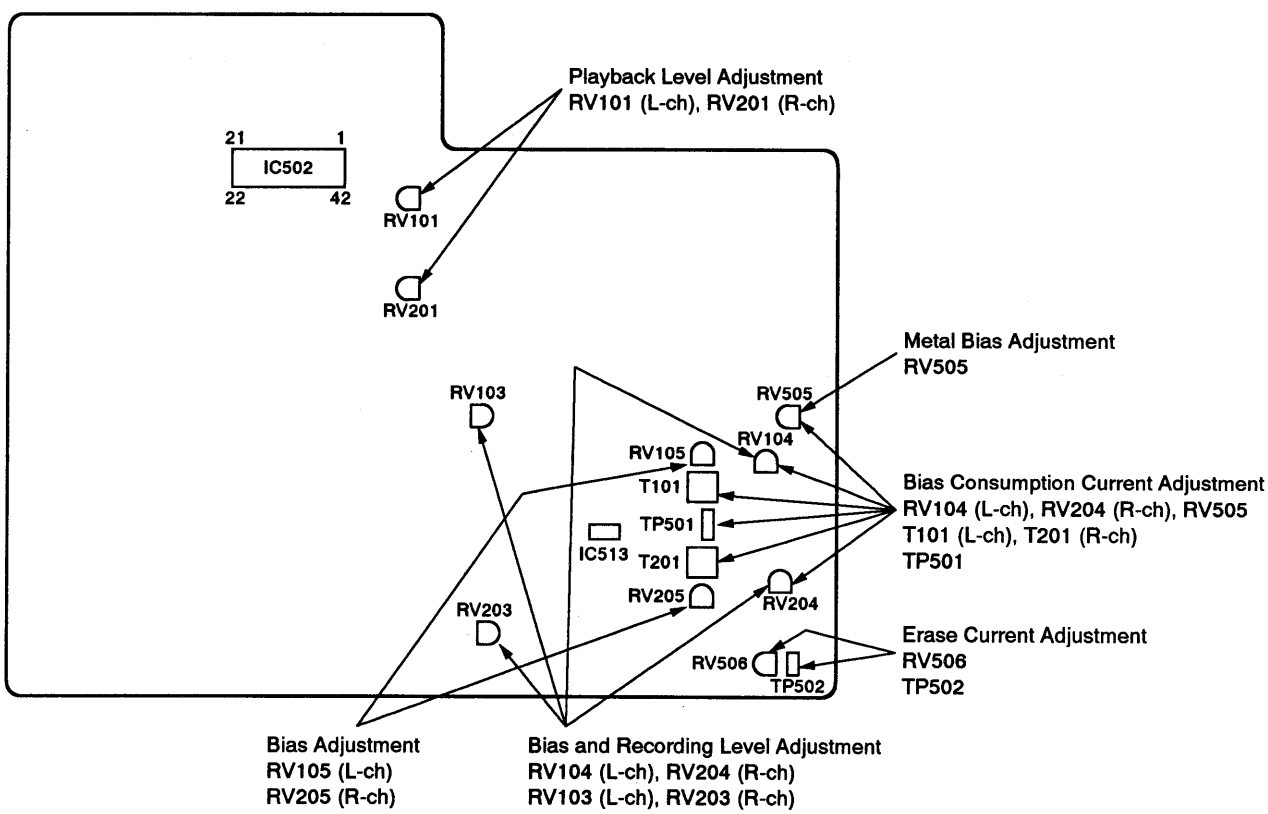
1. Short-circuit the test point TP801 of system control (A) board.
2. Adjust RV904 (HIGH), RV905 (MID) and RV906 (LEVEL) to become the level meter as the following display.

■■■■■■■■■■■■■□□□□□□ HIGH
△
▽
■■■■■■■■■■■■■□□□□□□ MID
LEVEL ►■◄

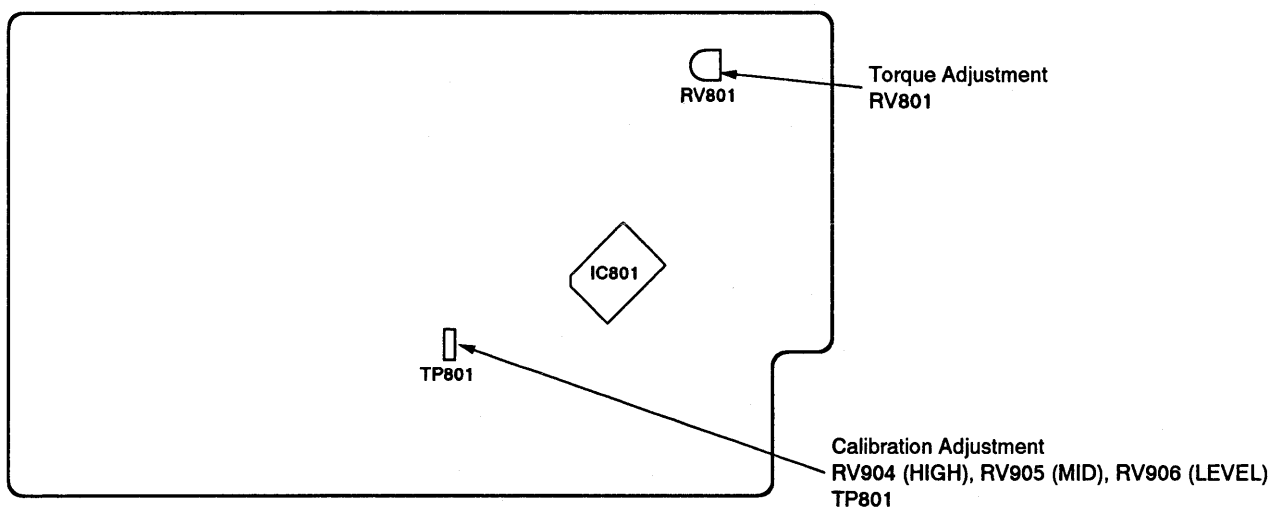
3. As for HIGH and MID, the segment with △▽ mark in the left side should be lit. (approve of flashing)
   And when the left segment is flashing, the right segment is approved of flashing.
4. As for LEVEL, ■ mark should be lit. (Both ends are approved of flashing.)
5. Release the short-circuit of TP801.

Adjustment Location :

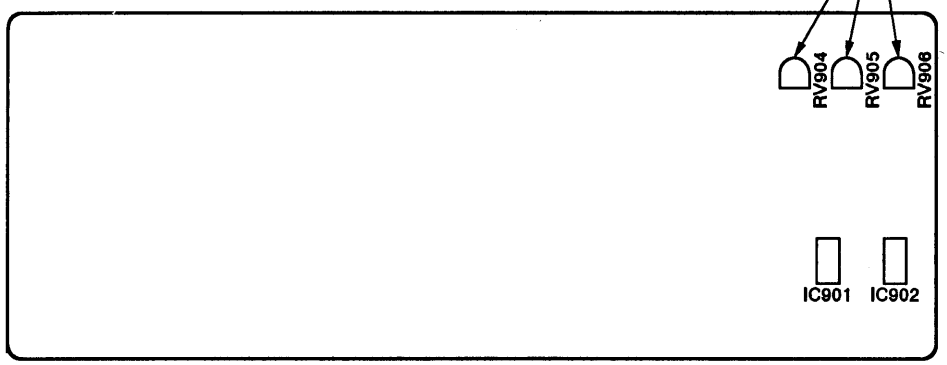
AUDIO (A) BOARD — Component side —



SYSTEM CONTROL (A) BOARD — Component side —



SYSTEM CONTROL (F) BOARD — Component side —



SECTION 5
DIAGRAMS

5-1. IC PIN FUNCTIONS

- **IC801 M38172M4-133FP**

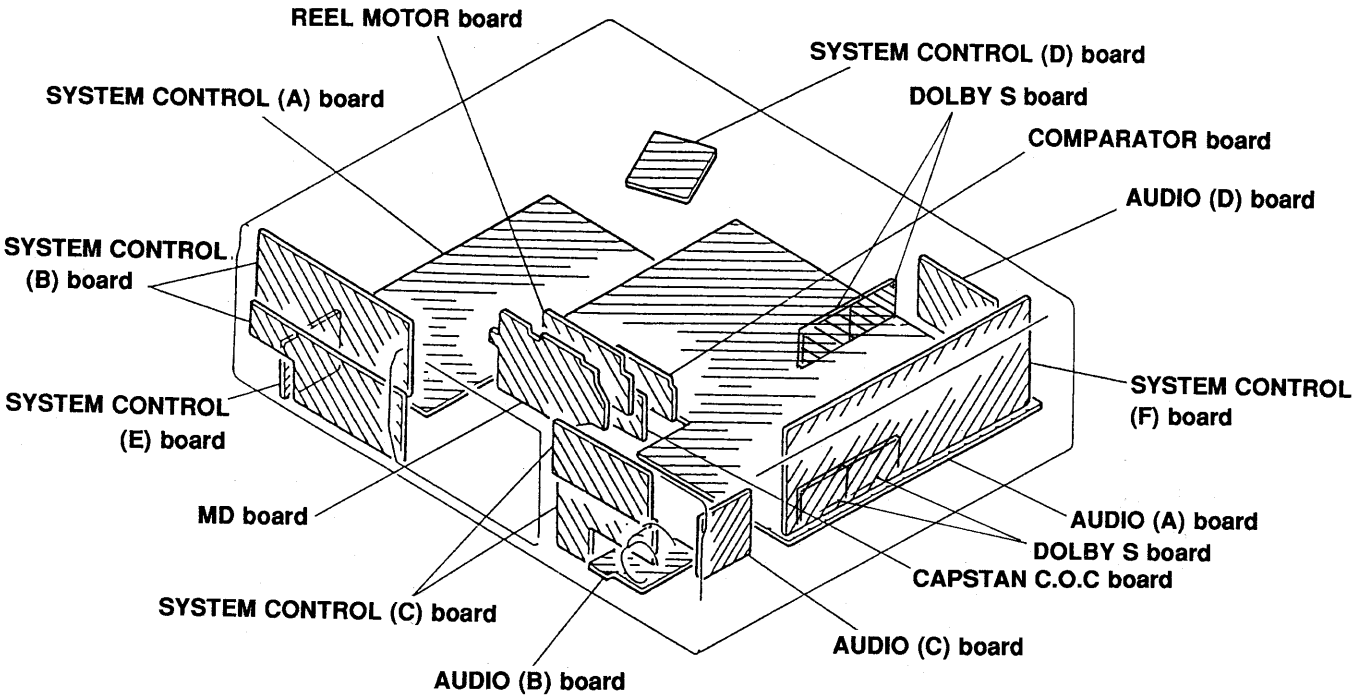
<table>
<tr><th>Pin No.</th><th>Pin Name</th><th>I/O</th><th>Function</th></tr>
<tr><td>1</td><td>EQ VOL</td><td>I</td><td>Calibration volume (EQ) data input</td></tr>
<tr><td>2</td><td>LEVEL VOL</td><td>I</td><td>Calibration volume (LEVEL) data input</td></tr>
<tr><td>3</td><td>T-PULSE</td><td>I</td><td>Mechanism deck take-up reel table sensor pulse input</td></tr>
<tr><td>4</td><td>S-PULSE</td><td>I</td><td>Mechanism deck supply reel table sensor pulse input</td></tr>
<tr><td>5</td><td>SYNC</td><td>I</td><td>Serial timing clock input</td></tr>
<tr><td>6</td><td>SR-CLK</td><td>I</td><td>Serial clock input</td></tr>
<tr><td>7</td><td>SR-OUT</td><td>O</td><td>Serial clock data output</td></tr>
<tr><td>8</td><td>SR-IN</td><td>I</td><td>Serial clock data input</td></tr>
<tr><td>9</td><td>NC</td><td>I</td><td>Not used (open)</td></tr>
<tr><td>10</td><td>M-CLK</td><td>I/O</td><td>Memory clock input</td></tr>
<tr><td>11</td><td>M-DATA</td><td>I/O</td><td>Memory data input</td></tr>
<tr><td>12</td><td>NC</td><td>–</td><td>Not used (open)</td></tr>
<tr><td>13</td><td>$\overline{\text{SERVO}}$</td><td>O</td><td>Eject motor control L: EJECT</td></tr>
<tr><td>14</td><td>$\overline{\text{FAST TRQ}}$</td><td>O</td><td>Motor speed control L: FAST</td></tr>
<tr><td>15</td><td>$\overline{\text{PLAY TRQ}}$</td><td>O</td><td>Play motor control L: PLAY</td></tr>
<tr><td>16</td><td>REEL FWD</td><td>O</td><td>Reel motor FWD control L: FWD</td></tr>
<tr><td>17</td><td>REEL RVS</td><td>O</td><td>Reel motor REV control L: REV</td></tr>
<tr><td>18</td><td>ASIST UP</td><td>O</td><td>Assist motor UP control L: UP</td></tr>
<tr><td>19</td><td>ASIST DOWN</td><td>O</td><td>Assist motor DOWN control L: DOWN</td></tr>
<tr><td>20</td><td>METAL HOLE</td><td>I</td><td>Mechanism deck METAL SW (S1007) input H: Metal tape, L: Normal or CrO_2 tape</td></tr>
<tr><td>21</td><td>$\overline{\text{HALF}}$</td><td>I</td><td>Mechanism deck HALF SW (S1006) input L: Tape is loaded</td></tr>
<tr><td>22</td><td>70μ HOLE</td><td>I</td><td>Mechanism deck 70μ SW (S1008) input H: 70μS L: 120μS (Constant when playback EQ)</td></tr>
<tr><td>23</td><td>$\overline{\text{REC TAB}}$</td><td>I</td><td>Mechanism deck FWD TAB (S1005) input L: There is Rec protector</td></tr>
<tr><td>24</td><td>NC</td><td>–</td><td>Not used (open)</td></tr>
<tr><td>25</td><td>SIRCS</td><td>I</td><td>SIRCS signal input</td></tr>
<tr><td>26</td><td>PWR DET</td><td>I</td><td>Power detect H: ON</td></tr>
<tr><td>27</td><td>$\overline{\text{RESET}}$</td><td>I</td><td>RESET input</td></tr>
<tr><td>28</td><td>XC-IN</td><td>I</td><td>Not used (Connect to GND)</td></tr>
<tr><td>29</td><td>XC-OUT</td><td>O</td><td>Not used (open)</td></tr>
<tr><td>30</td><td>X-IN</td><td>I</td><td>Clock input (6MHz)</td></tr>
<tr><td>31</td><td>X-OUT</td><td>O</td><td>Clock output (6MHz)</td></tr>
<tr><td>32</td><td>Vss</td><td>–</td><td>GND</td></tr>
<tr><td>33</td><td>NC</td><td>–</td><td>Not used (open)</td></tr>
<tr><td>34</td><td>$\overline{\text{DRSW}}$</td><td>I</td><td>Mechanism deck DOOR SW (S1002) input</td></tr>
<tr><td>35</td><td>$\overline{\text{CLSW}}$</td><td>I</td><td>Mechanism deck CLOSE SW (S1003) input</td></tr>
<tr><td>36</td><td>OPSW</td><td>I</td><td>Mechanism deck OPEN SW (S1004) input</td></tr>
<tr><td>37 to 40</td><td>PT3 to PT0</td><td>O</td><td>Rotary encoder input for mechanism deck head base position detection
<table>
<tr><th></th><th>PAUSE</th><th>AMS</th><th>FF/REW</th><th>STOP</th><th colspan="2">PLAY</th><th colspan="2">EJECT</th></tr>
<tr><td>PT3</td><td>L</td><td>L</td><td>L</td><td>L</td><td>H</td><td>H</td><td>H</td><td>H</td></tr>
<tr><td>PT2</td><td>L</td><td>L</td><td>H</td><td>H</td><td>L</td><td>L</td><td>H</td><td>H</td></tr>
<tr><td>PT1</td><td>L</td><td>H</td><td>L</td><td>H</td><td>L</td><td>H</td><td>L</td><td>H</td></tr>
<tr><td>PT0</td><td>L</td><td>H</td><td>H</td><td>L</td><td>L</td><td>L</td><td>L</td><td>L</td></tr>
</table></td></tr>
</table>

Pin No.	Pin Name	I/O	Function
41	NC	–	Not used (open)
42	NC	–	
43 to 48	EQ6 to EQ1	O	Calibration EQ adjust output
49 to 53	LV5 to LV1	O	Calibration LEVEL adjust output
54 to 56	NC	O	Not used (open)
57	S-TAPE	O	DOLBY S monitor output
58	NORM- TAPE	O	DOLBY B, C monitor output
59	SOURCE	O	Source ON/OFF control H: ON
60	DOLBY ON	O	DOLBY B ON/OFF control H: ON
61	DOLBY C	O	DOLBY C ON/OFF control L: ON
62	DOLBY S	O	DOLBY S ON/OFF control H: ON
63	FILTER	O	MPX FILTER ON/OFF control H: ON
64	HX PRO	O	HX PRO ON/OFF control H: ON
65	$\overline{\text{LINE MUTE}}$	O	LINE MUTE ON/OFF control L: ON
66	$\overline{\text{REC MUTE}}$	O	REC MUTE ON/OFF control L: ON
67	BIAS	O	BIAS ON/OFF control H: ON
68	$\overline{\text{AMS MODE}}$	O	AMS MODE ON/OFF control L: ON
69	TYPE 1	O	REC equalizer switching output H: TYPE 1
70	TYPE 2	O	REC equalizer switching output H: TYPE 2
71	TYPE 4	O	REC equalizer switching output H: TYPE 4
72	$\overline{\text{CAL MODE}}$	O	Calibration control output
73	Vcc	–	Power supply (+5V)
74	Vee	–	Power supply (–25V)
75	AVss	–	GND
76	Vref	–	Reference voltage (+5V)
77	AMS IN	I	AMS signal input
78	LINE	I	TEST TERMINAL L: TEST MODE
79	KEY-IN	I	Key input
80	DOLBY SW	I	DOLBY SW detection input

- **IC851 M38122M2-069SP**

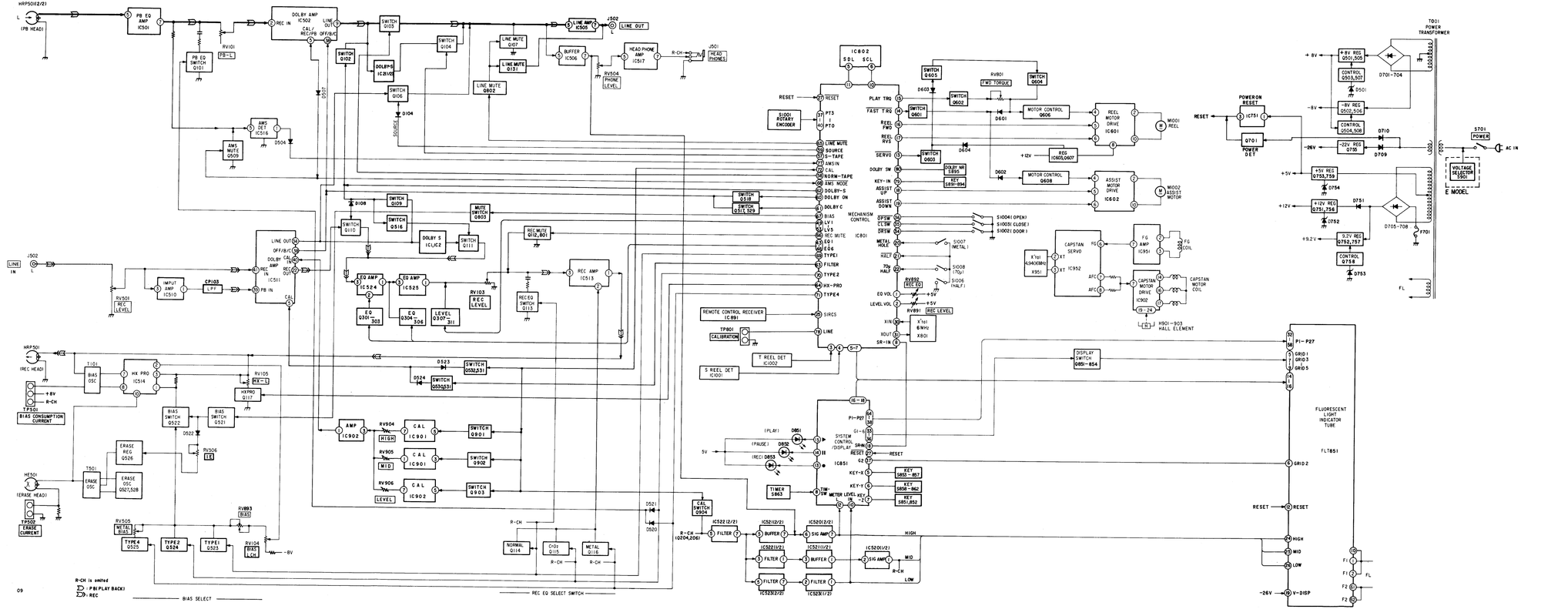
Pin No.	Pin Name	I/O	Function
1	Vcc	–	Power supply (+5V)
2	Vee	–	Power supply (–25V)
3	AVss	–	GND
4	Vref	–	Reference voltage (+5V)
5	KEY-X	I	Key switch input (A/D) OPEN/CLOSE, STOP, REW, FF, REC
6	KEY-Y	I	Key switch input (A/D) PLAY, PAUSE, REW, AMS, FF, AMS, REC MUTE
7	KEY-Z	I	Key switch input (A/D) RESET, MEMORY
8	TIM-SW	I	TIMER switch input (A/D) PLAY, OFF, REC
9	NC	–	Not used (open)
10	LEVEL-SW	I	Level meter input (Calibration)
11	METER-R	I	Level meter input (R CH)
12	METER-L	I	Level meter input (L CH)
13	REC LED	O	LED lights (REC)
14	PAUSE LED	O	LED lights (PAUSE)
15	PLAY LED	O	LED lights (PLAY)
16	SR-CLK	I	Serial clock input
17	SR-OUT	O	Serial data output
18	SR-IN	I	Serial data input
19 to 25	NC	–	Not used (open)
26	SYNC	I	Serial timing clock input
27	RESET	I	Reset signal input
28, 29	NC	–	Not used (open)
30	XI	I	Clock input (6MHz)
31	XO	O	Clock output (6MHz)
32	Vss	–	GND
33	GRID5	O	FL tube grid output
34	GRID4	O	
35	GRID3	O	
36	GRID1	O	
37	GRID2	O	
38	SEG A	O	FL tube segment output
39 to 64	SEGz to SEGa	O	

5-2. CIRCUIT BOARDS LOCATION



NOTE : AUDIO (A)/ (B)/ (C)/ (D) and DOLBY S board are including in AUDIO board.
SYSTEM CONTROL (A)/ (B)/ (C)/ (D)/ (E)/ (F) are including in SYSTEM CONTROL board.

5-3. BLOCK DIAGRAM



5-4. PRINTED WIRING BOARD — AUDIO SECTION —

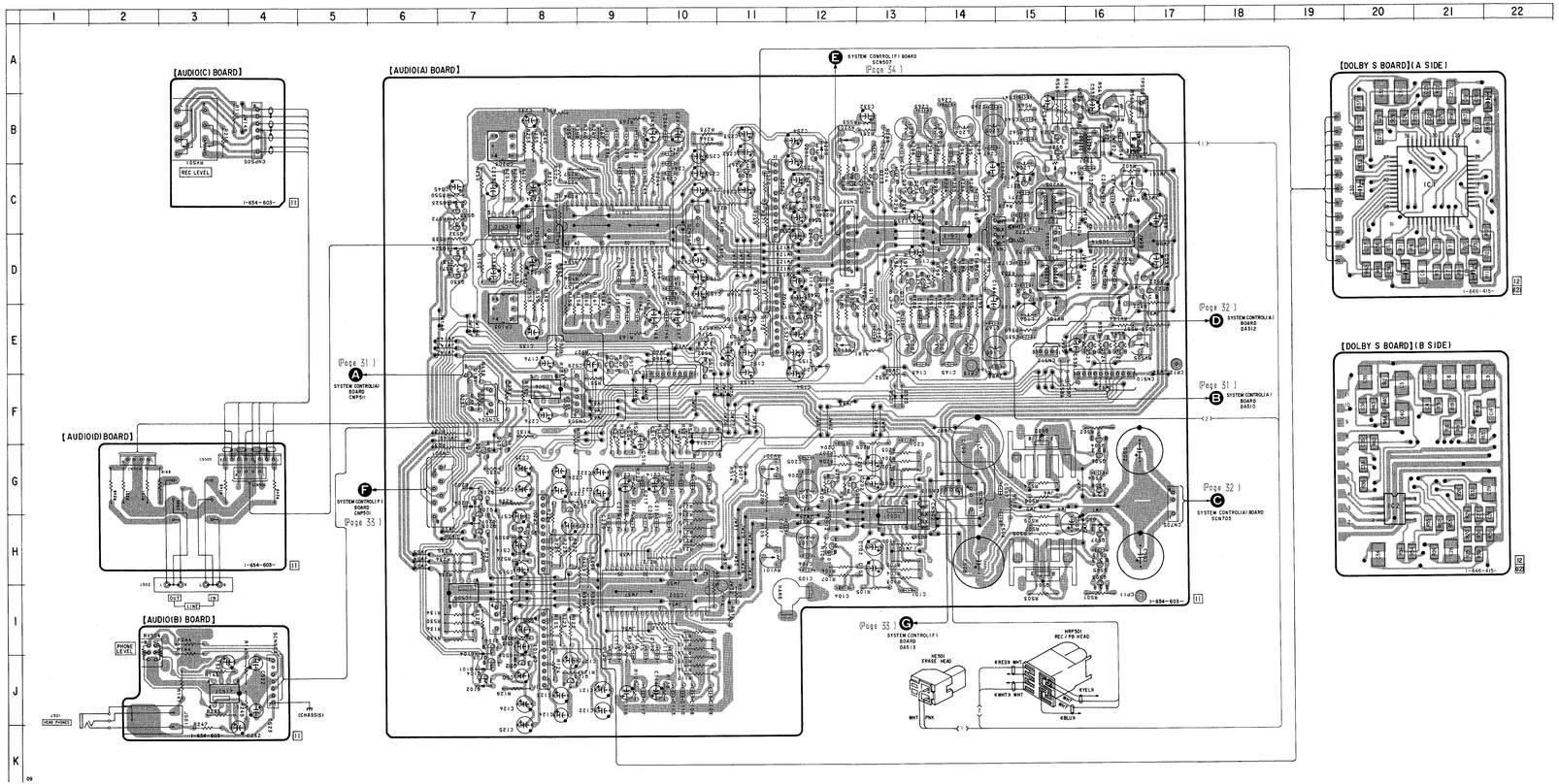
• See page 18 for Circuit Boards Location.

• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D101	J-7	Q115	D-13
D102	J-7	Q116	D-13
D104	I-7	Q117	D-15
D108	D-12	Q131	F-7
D109	E-12	Q201	G-12
D201	H-7	Q202	G-8
D202	G-7	Q203	H-7
D204	G-7	Q204	G-7
D208	C-12	Q206	G-7
D209	B-12	Q207	G-7
D501	H-16	Q209	C-11
D504	F-9	Q210	D-12
D507	G-11	Q211	B-12
D508	I-8	Q212	C-13
D509	H-8	Q213	C-13
D516	C-12	Q214	C-13
D517	E-12	Q215	C-13
D520	F-13	Q216	C-13
D521	F-13	Q217	C-15
D522	B-16	Q231	F-7
D523	C-7	Q501	H-15
D524	C-7	Q502	F-15
		Q503	H-16
IC1	C-21	Q504	F-16
IC2	G-20	Q505	H-16
IC501	H-13	Q507	H-16
IC502	I-10	Q508	G-16
IC505	I-7	Q509	G-12
IC506	F-8	Q512	J-8
IC510	C-7	Q513	H-8
IC511	C-9	Q514	C-12
IC513	D-14	Q515	E-12
IC514	D-16	Q516	E-10
IC516	F-10	Q517	E-9
IC517	J-3	Q518	E-10
		Q521	D-17
Q101	H-12	Q522	D-17
Q102	J-8	Q523	E-16
Q103	J-7	Q524	E-16
Q104	J-7	Q525	E-16
Q106	I-7	Q526	B-16
Q107	F-7	Q527	B-15
Q109	E-11	Q528	B-15
Q110	D-12	Q529	E-9
Q111	E-12	Q530	D-7
Q112	D-12	Q531	D-7
Q113	D-13	Q532	C-7
Q114	D-13	Q533	C-7

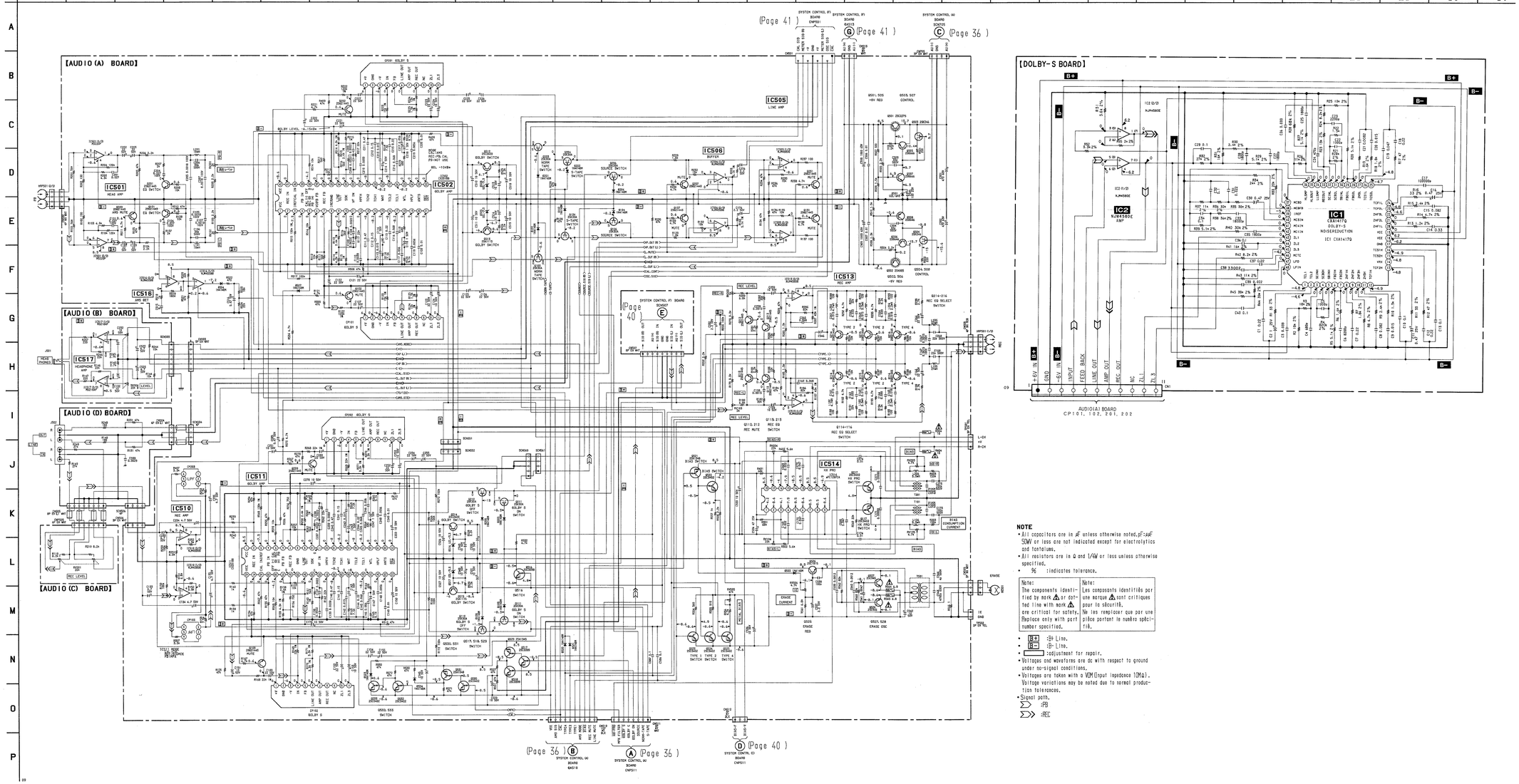
Note:

- ○—— : parts extracted from the component side.
- ● : Through hole.
- ▒▒▒ : Pattern from the side which enable seeing.



5-5. SCHEMATIC DIAGRAM — AUDIO SECTION —

• See page 42 for IC Block Diagrams.



NOTE

- All capacitors are in μF unless otherwise noted. pF: μμF
  50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- % : indicates tolerance.

Note: The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Note: Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- B+ : B+ Line.
- B− : B− Line.
- [ ] : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  - PB
  - REC

5-6. PRINTED WIRING BOARD — SYSTEM CONTROL SECTION —

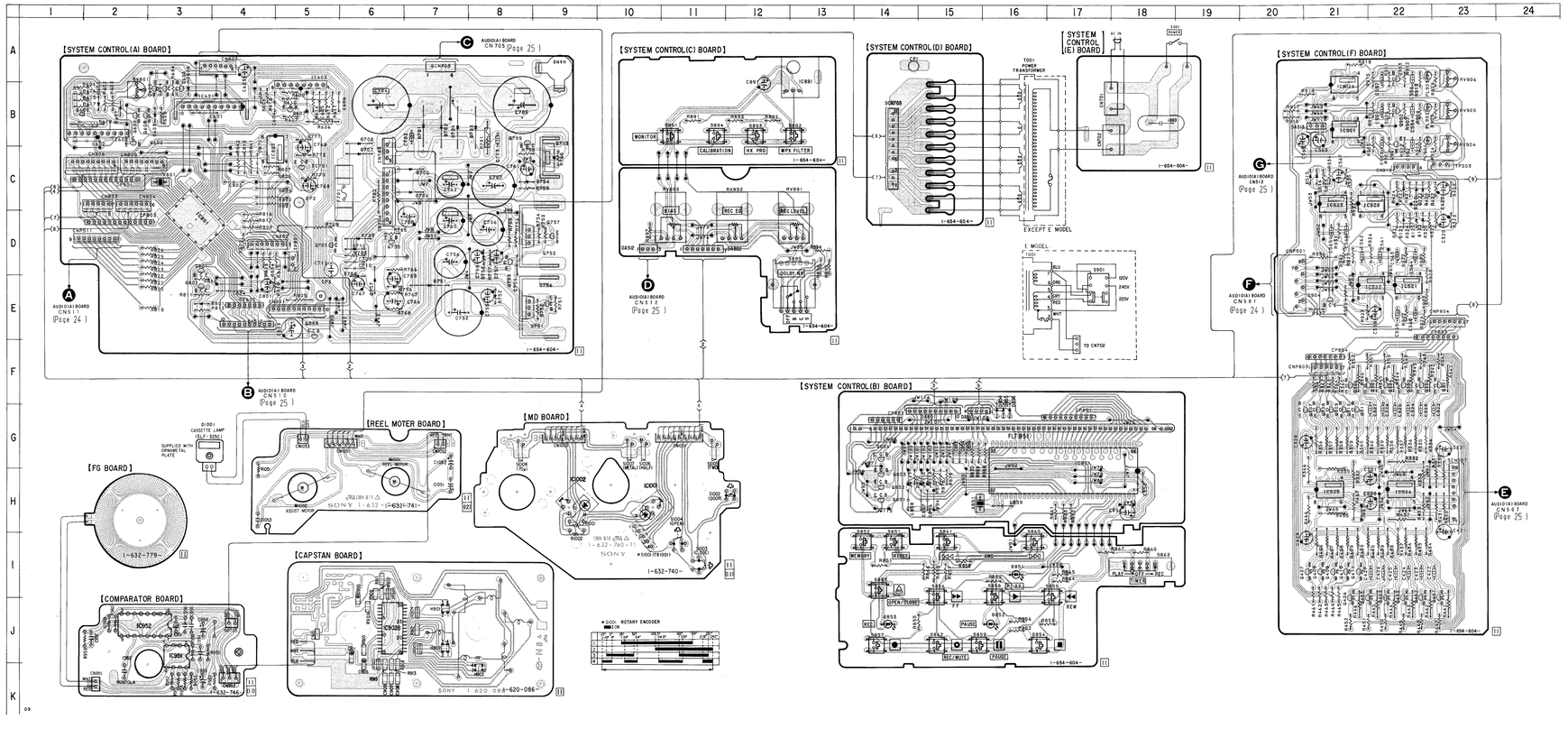
• See page 18 for Circuit Boards Location.

• **Semiconductor Location**

Ref. No.	Location	Ref. No.	Location
D120	D-22	IC952	J-2
D121	D-22	IC1001	H-9
D122	D-22	IC1002	H-9
D220	C-22		
D221	C-22	Q301	F-23
D222	C-22	Q302	F-22
D514	C-21	Q303	F-22
D515	C-21	Q304	F-22
D601	B-2	Q305	F-22
D602	B-2	Q306	F-21
D603	B-3	Q307	G-21
D604	A-3	Q308	G-21
D701	B-7	Q309	G-21
D702	B-7	Q310	G-21
D703	B-8	Q311	G-21
D704	B-7	Q401	I-23
D705	C-7	Q402	I-22
D706	C-7	Q403	I-22
D707	C-6	Q404	I-22
D708	B-6	Q405	I-22
D709	D-6	Q406	I-21
D710	D-6	Q407	I-21
D751	E-7	Q408	I-21
D752	E-8	Q409	I-21
D753	D-8	Q410	I-21
D754	C-9	Q411	I-21
D756	E-6	Q601	B-2
D757	E-6	Q602	B-3
D758	D-6	Q603	B-3
D801	E-3	Q604	B-3
D851	I-16	Q605	B-3
D852	J-16	Q606	A-3
D853	J-14	Q607	B-5
D854	G-16	Q608	B-1
D855	G-16	Q701	D-5
D856	G-16	Q751	E-8
		Q752	D-9
IC520	C-22	Q753	C-9
IC521	E-22	Q755	D-6
IC522	E-22	Q756	E-9
IC523	C-21	Q757	D-9
IC524	H-22	Q758	D-8
IC525	H-21	Q759	D-8
IC601	B-3	Q801	D-3
IC602	B-2	Q802	E-3
IC603	A-5	Q803	E-5
IC751	C-5	Q851	H-14
IC801	C-3	Q852	H-14
IC802	C-4	Q853	H-14
IC851	G-17	Q854	G-14
IC891	B-13	Q901	B-22
IC901	B-21	Q902	A-22
IC902A	A-21	Q903	A-22
IC902B	J-6	Q904	E-21
IC951	J-3		

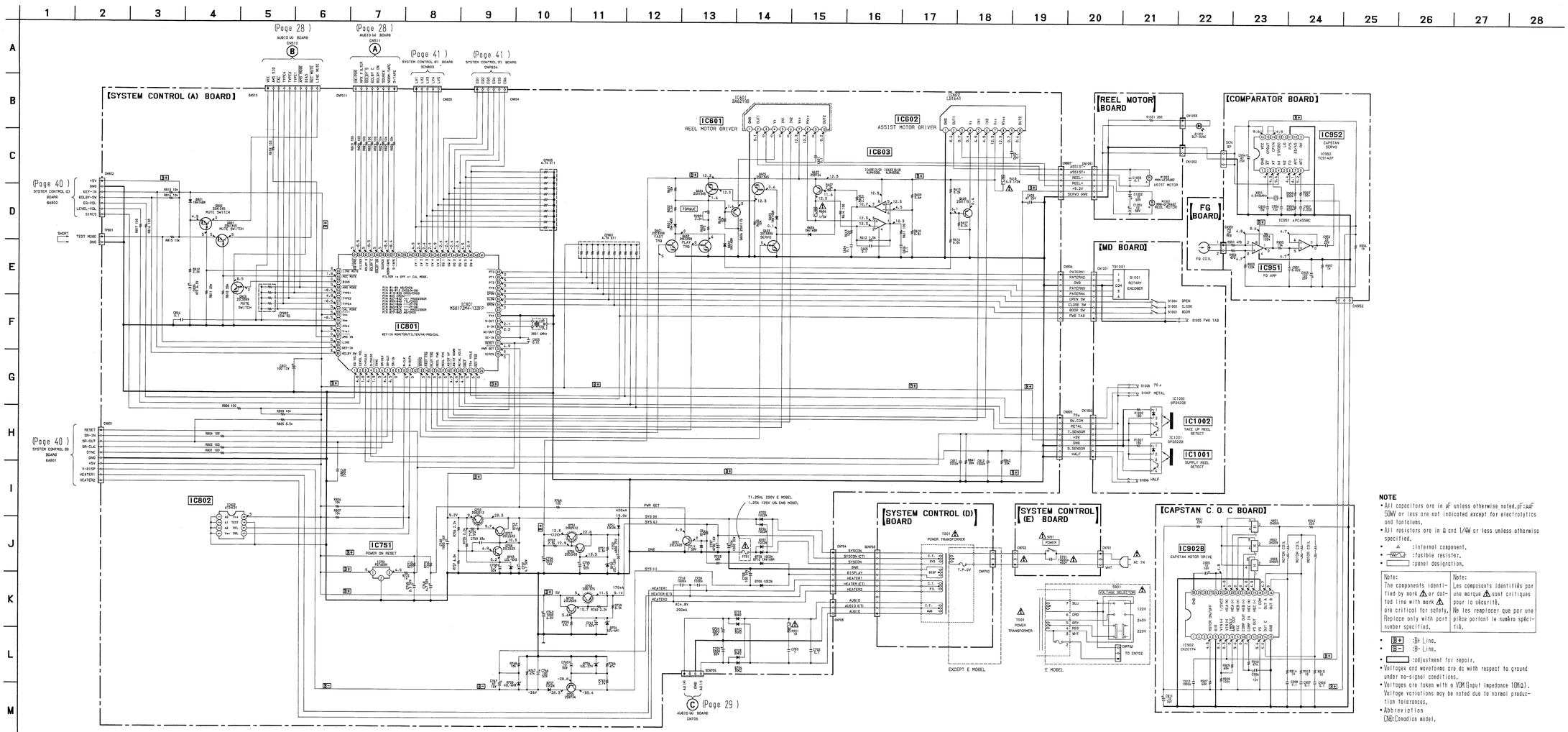
Note:

- ⟜ : parts extracted from the component side.
- ▨ : Pattern from the side which enable seeing.



5-7. SCHEMATIC DIAGRAM — SYSTEM CONTROL (1/2) SECTION —

- See page 15 for IC Pin Function. (IC801)
- See page 42 for IC Block Diagrams.



NOTE

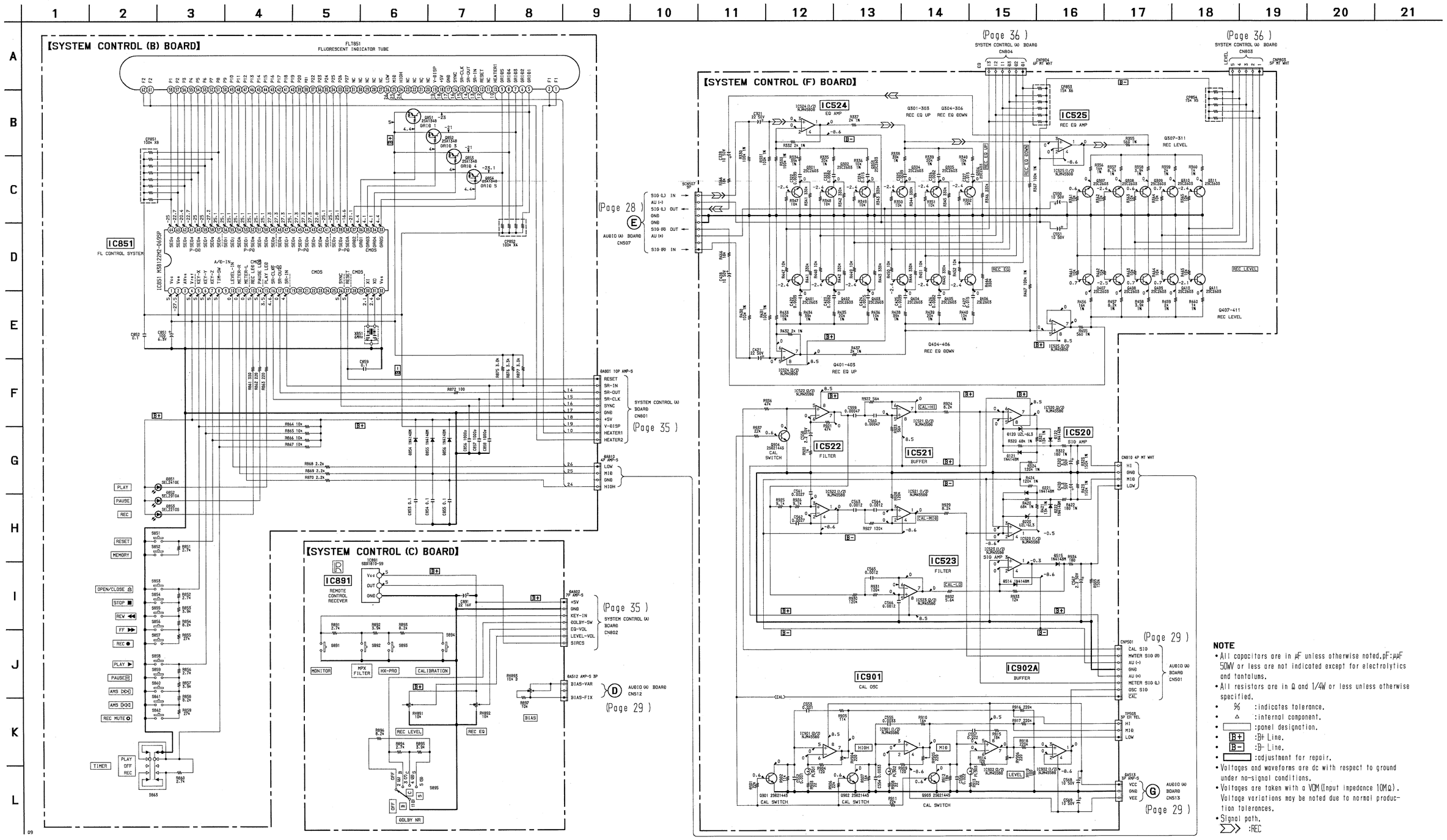
- All capacitors are in μF unless otherwise noted. pF: μμF
  50WV or less are not indicated except for electrolytics and tantaluns.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- △ : internal component.
- ⚠ : fusible resistor.
- [ ] : panel designation.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

- B+ : B+ Line.
- B− : B− Line.
- [ ] : adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Abbreviation
  CND : Canadian model.

5-8. SCHEMATIC DIAGRAM — SYSTEM CONTROL (2/2) SECTION —

• See page 17 for IC Pin Function. (IC851)

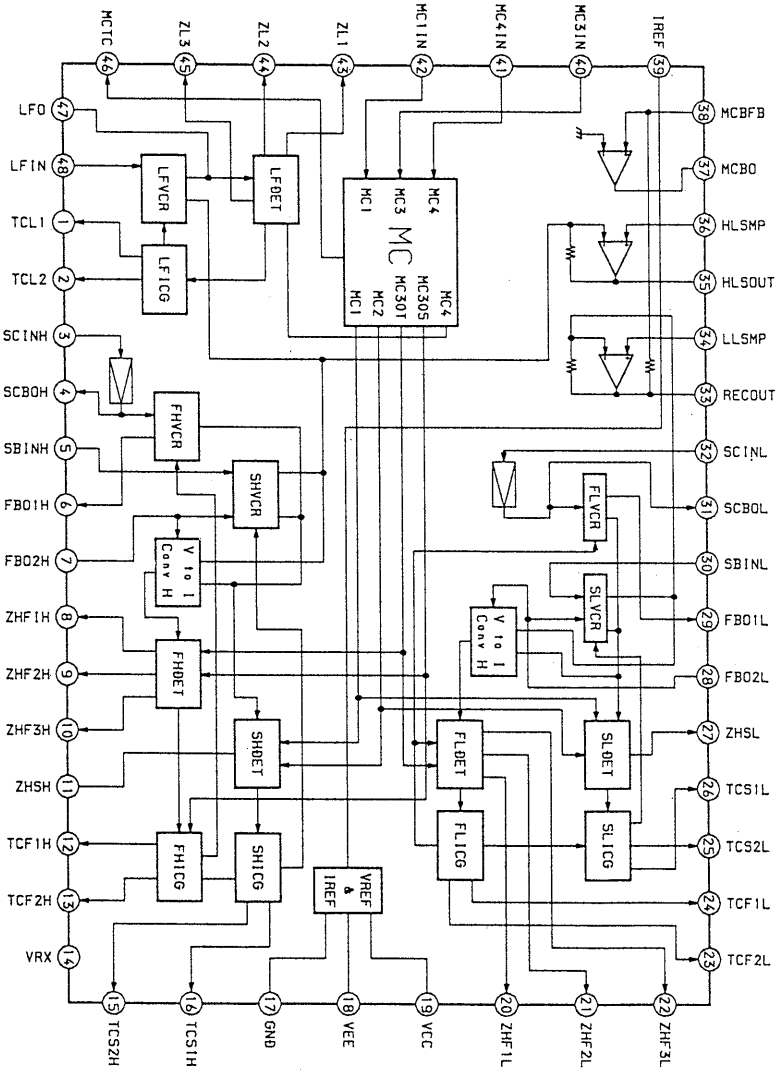


NOTE

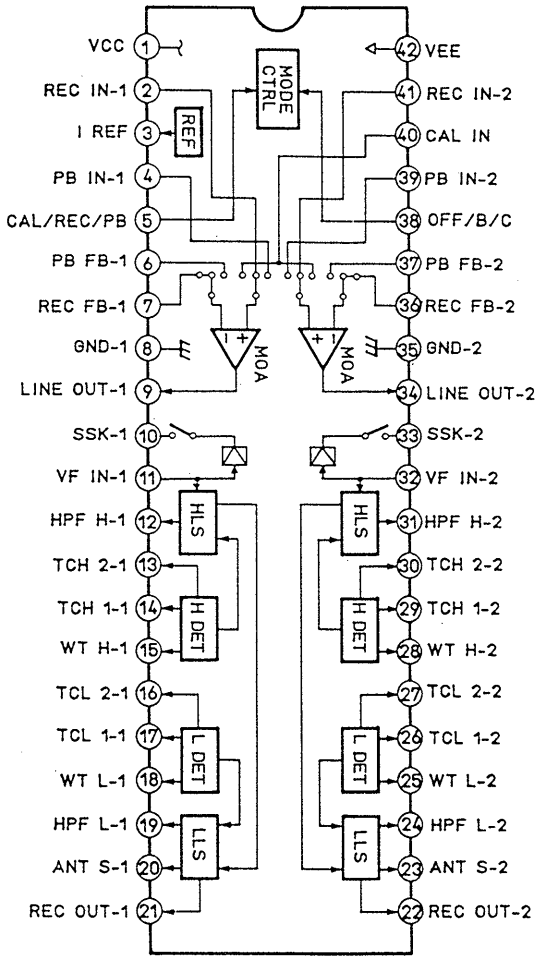
- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantaliums.
- All resistors are in Ω and 1/4W or less unless otherwise specified.
- % :indicates tolerance.
- △ :internal component.
- ▭ :panel designation.
- B+ :B+ Line.
- B- :B- Line.
- ▭ :adjustment for repair.
- Voltages and waveforms are dc with respect to ground under no-signal conditions.
- Voltages are taken with a VOM (Input impedance 10MΩ). Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ≫ :REC

5-9. IC BLOCK DIAGRAMS

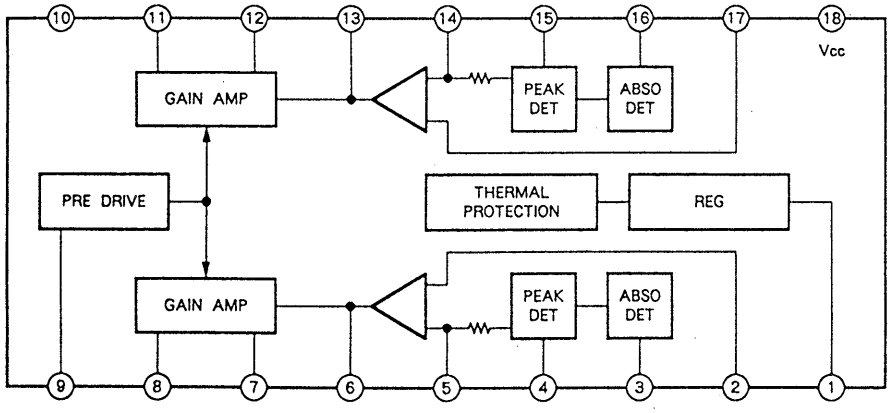
IC1 CXA1417Q



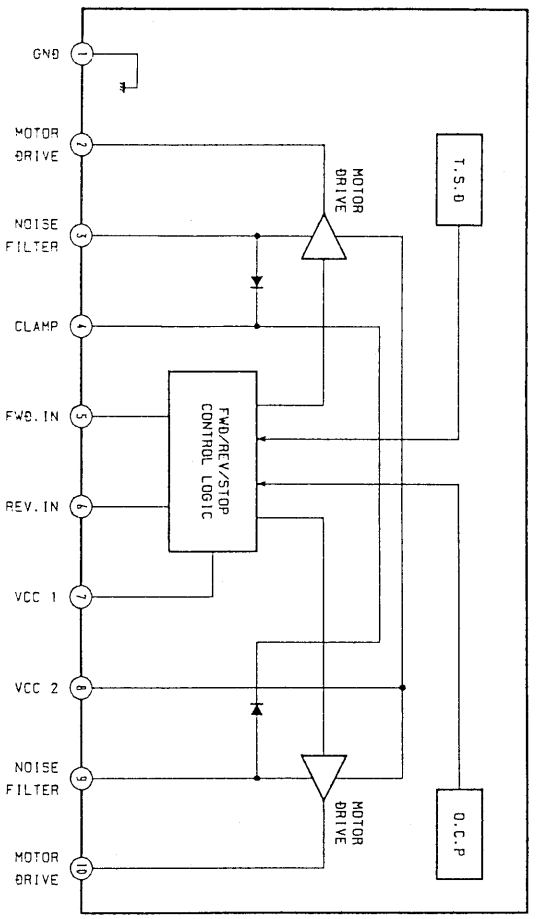
IC502/511 CX20188



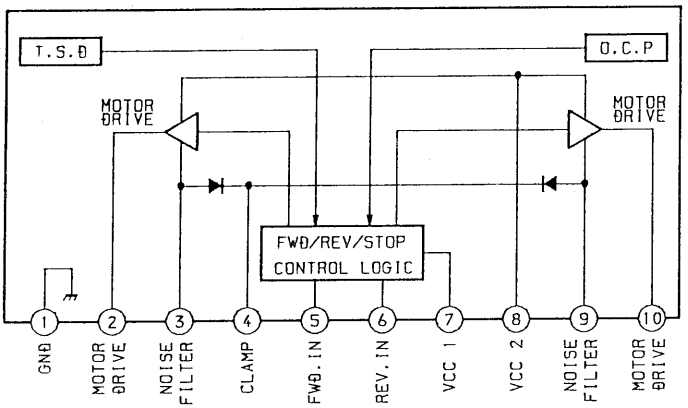
IC514 μPC1297CA



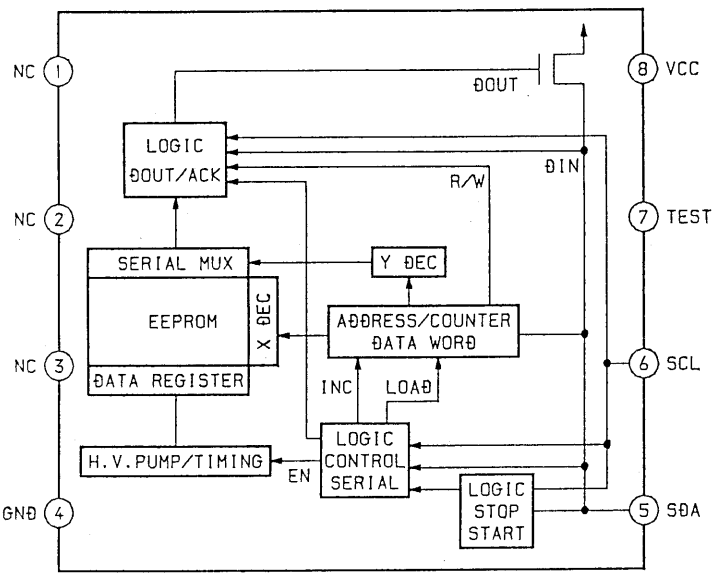
IC601 BA6219B



IC602 LB1641



IC802 AT24C01



SECTION 6
EXPLODED VIEWS

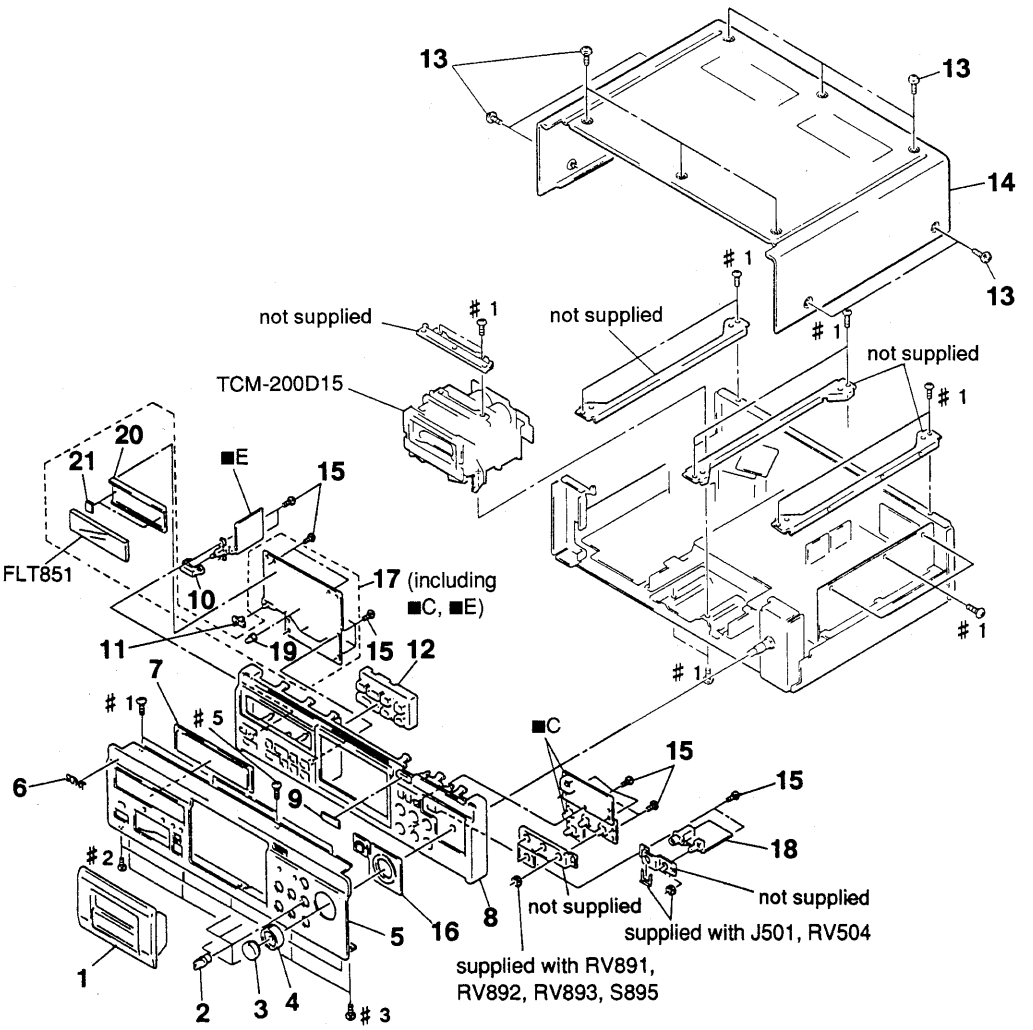
NOTE:
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Hardware (# mark) list and accessories and packing materials are given in the last of this parts list.
- Abbreviation
  CND : Canadian model

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

6-1. FRONT PANEL SECTION

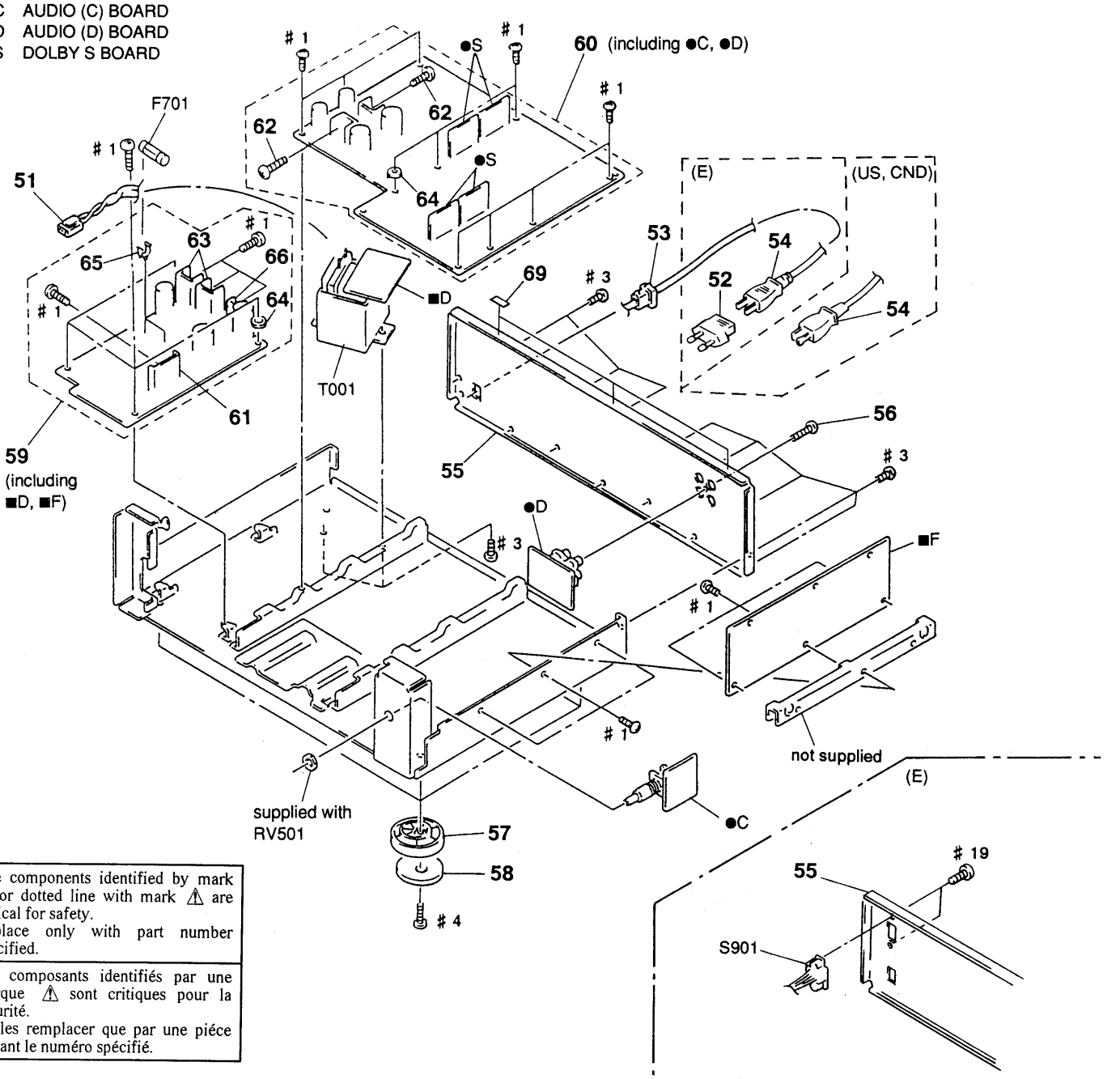
■C SYSTEM CONTROL (C) BOARD
■E SYSTEM CONTROL (E) BOARD



Ref.No.	Part No.	Description	Remark
1	X-3369-451-1	LID ASSY, CASSETTE	
2	X-3362-818-1	KNOB (DIA. 12) ASSY (B), FLAT	
3	3-919-248-01	KNOB (R)	
4	3-919-247-01	KNOB (L)	
5	3-919-383-01	PANEL, FRONT	
6	4-942-568-01	EMBLEM (NO.5), SONY	
7	3-919-224-01	WINDOW (METER)	
* 8	3-919-385-01	PANEL (BASE)	
9	3-385-600-01	WINDOW (R) (US, E)	
10	3-354-932-01	BUTTON (POWER)	
11	3-919-257-01	KNOB (TIMER)	
12	X-3369-438-1	BUTTON (CONTROL) ASSY	
13	3-704-366-01	SCREW (CASE) (M3X8)	
14	3-919-386-01	CASE	
15	4-951-620-01	SCREW (2.6X8), +BVTP	
16	3-919-384-01	ESCUTCHEON (VOL)	
* 17	A-2007-396-A	SYSTEM CONTROL BOARD, COMPLETE (E)	
* 17	A-2007-398-A	SYSTEM CONTROL BOARD, COMPLETE (US, CND)	
* 18	A-2007-395-A	AUDIO BOARD, COMPLETE (E)	
* 18	A-2007-397-A	AUDIO BOARD, COMPLETE (US, CND)	
* 19	3-362-478-31	HOLDER (T), LED	
* 20	3-385-607-01	HOLDER, FL TUBE	
* 21	3-354-927-21	CUSHION	
FLT851	1-517-359-11	INDICATOR TUBE, FLUORESCENT	

6-2. CHASSIS SECTION

■D SYSTEM CONTROL (D) BOARD
■F SYSTEM CONTROL (F) BOARD
●C AUDIO (C) BOARD
●D AUDIO (D) BOARD
●S DOLBY S BOARD



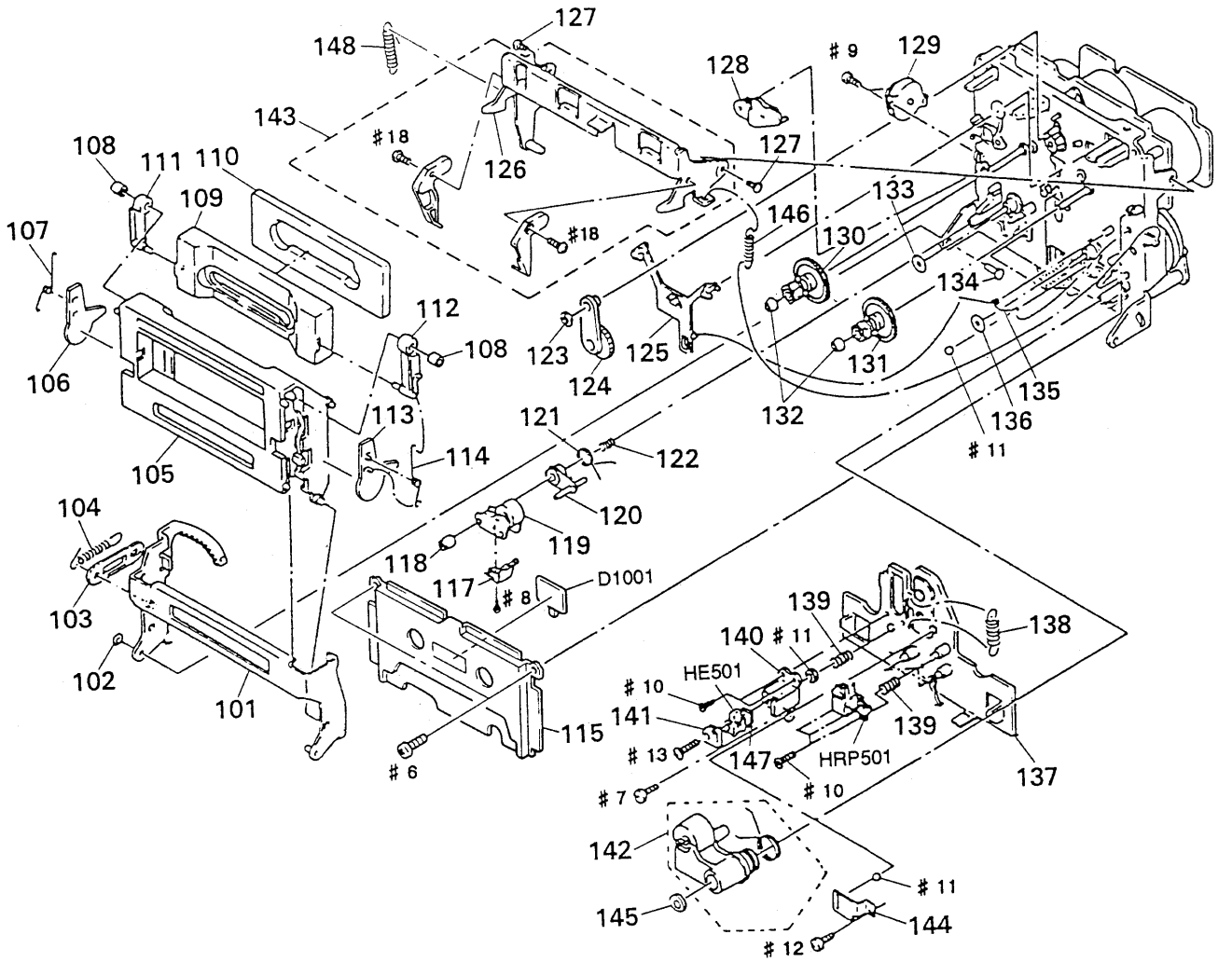
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
* 51	1-590-321-61	LEAD (WITH CONNECTOR)	
⚠52	1-569-007-11	ADAPTER, CONVERSION 2P (E)	
* 53	3-703-244-00	BUSHING (2104), CORD (US, CND)	
* 53	3-703-571-11	BUSHING (S) (4516), CORD (E)	
⚠54	1-559-583-21	CORD, POWER (US, CND)	
⚠54	1-696-027-11	CORD, POWER (E)	
* 55	3-919-387-11	PANEL, BACK (US, CND)	
* 55	3-919-387-21	PANEL, BACK (E)	
56	3-704-515-01	SCREW (BV/RING)	
57	4-970-123-01	FOOT (F50180S)	
58	4-970-124-01	CUSHION (F50180S)	
* 59	A-2007-396-A	SYSTEM CONTROL BOARD, COMPLETE (E)	
* 59	A-2007-398-A	SYSTEM CONTROL BOARD, COMPLETE (US, CND)	
* 60	A-2007-395-A	AUDIO BOARD, COMPLETE (E)	

Ref. No.	Part No.	Description	Remark
* 60	A-2007-397-A	AUDIO BOARD, COMPLETE (US, CND)	
* 61	3-356-925-01	HEAT SINK	
62	2-259-121-01	SCREW, TR	
* 63	4-880-403-11	HEAT SINK	
* 64	4-942-204-01	PLATE, GROUND	
* 65	1-533-213-31	HOLDER, FUSE	
* 66	3-309-144-21	HEAT SINK	
⚠S901	1-692-155-11	SELECTOR, POWER VOLTAGE (VOLTAGE SELECTOR) (E)	
⚠F701	1-532-285-00	FUSE, TIME-LAG (T1.25A 250V) (E)	
⚠F701	1-532-741-11	FUSE, GLASS TUBE (1.25A 125V) (US, CND)	
⚠T001	1-427-832-11	TRANSFORMER, POWER (US, CND)	
⚠T001	1-427-833-11	TRANSFORMER, POWER (E)	

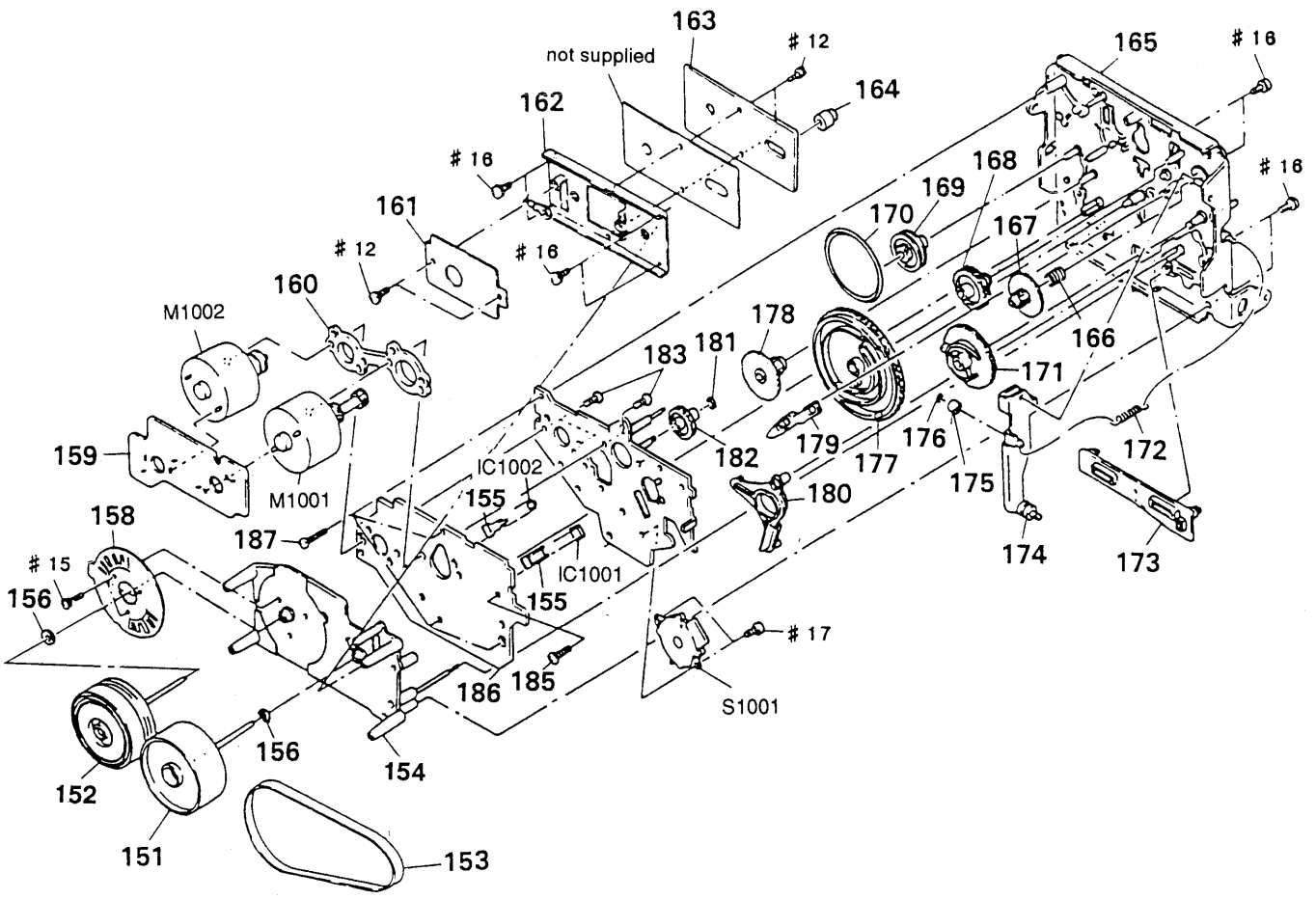
6-3. MECHANISM SECTION-1 (TCM-200D15)



Ref. No.	Part No.	Description	Remark
101	X-3362-671-1	HOLDER (BG) ASSY, CASSETTE	
102	3-558-708-21	WASHER, STOPPER	
* 103	3-356-717-01	LEVER (JOINT)	
104	3-356-626-01	SPRING, TENSION	
105	X-3369-639-1	HOLDER (D15) ASSY, CASSETTE	
106	3-920-319-01	LEVER (L-T)	
107	3-920-363-01	SPRING (L), TORSION	
108	3-356-946-01	BUSHING	
109	3-356-928-01	PLATE (A), ORNAMENTAL	
* 110	3-356-929-01	ABSORBENT, VIBRATION	
111	3-356-933-01	LEVER (LB)	
112	3-356-931-01	LEVER (RB)	
113	3-920-320-01	LEVER (R-T)	
114	3-920-364-01	SPRING (R), TORSION	
115	X-3356-613-1	PLATE ASSY, ORNAMENTAL	
117	3-920-576-01	GUIDE (SL), TAPE	
118	3-356-652-01	NUT (PINCH LEVER S)	
119	X-3356-621-1	LEVER (PINCH LEVER S) ASSY	
120	3-356-660-01	LEVER (PS)	
121	3-356-661-01	SPRING (PINCH LEVER S), TORSION	
122	3-356-657-01	SPRING (PS), COMPRESSION	
123	3-669-465-11	WASHER (1.5), STOPPER	
124	X-3356-641-1	LEVER (FR2) ASSY	
125	3-356-614-01	SLIDER (BRAKE)	
* 126	X-3356-608-1	LEVER (LIFTER) ASSY	

Ref. No.	Part No.	Description	Remark
127	3-356-601-11	SCREW, STEP	
128	X-3356-623-1	LEVER (BT) ASSY	
129	3-319-224-41	DAMPER, SMALL	
130	X-3356-629-1	GEAR (S) ASSY	
131	X-3356-627-1	GEAR (T) ASSY	
132	3-362-308-01	CAP (REEL)	
133	3-332-763-01	RING, OIL RESERVOIR	
134	3-356-710-01	SHAFT (LEFT) (CASSETTE HOLDER)	
135	3-356-619-01	SPRING (B), TORSION	
136	3-920-322-01	WASHER (FELT RING T)	
* 137	X-3362-199-1	SLIDER (HEAD CHASSIS D) ASSY	
138	3-356-658-01	SPRING (LIMITER H), TENSION	
139	3-564-121-00	SPRING, COMPRESSION	
* 140	3-576-977-00	BRACKET, E. HEAD	
141	3-318-433-01	SPRING	
142	X-3367-095-1	LEVER (PINCH LEVER DT) ASSY	
* 143	X-3369-638-1	LEVER (LIFTER) COMPLETE ASSY	
144	3-356-656-01	SPRING (HEAD PC BOARD), LEAF	
145	3-669-596-01	WASHER (2.3), STOPPER	
146	3-920-366-01	SPRING (LIFTER R), TENSION	
* 147	1-608-268-00	ERASE HEAD BOARD	
148	3-920-365-01	SPRING (LIFTER L), TENSION	
D1001	8-719-980-85	DIODE SLF325C	
HE501	1-543-836-11	HEAD, MAGNETIC (ERASE)	
HRP501	1-543-684-21	HEAD, MAGNETIC (RECORD/PLAYBACK)	

6-4. MECHANISM SECTION-2 (TCM-200D15)



Ref. No.	Part No.	Description	Remark
151	X-3369-635-1	FLYWHEEL (DS 2.5) ASSY	
152	X-3369-634-1	FLYWHEEL (DT 2.8) ASSY	
153	3-364-600-01	BELT (CAPSTAN)	
* 154	X-3369-637-1	DECK (D 2.8) ASSY	
155	3-356-631-01	HOLDER (SENSOR)	
156	3-356-705-51	WASHER (CAPSTAN)	
158	1-632-779-11	FG BOARD	
* 159	1-632-741-11	REEL MOTOR BOARD	
* 160	3-356-628-01	SPACER (MOTOR)	
* 161	1-632-746-11	COMPARATOR BOARD	
* 162	X-3362-282-1	BRACKET (THRUST RETAINER) ASSY	
* 163	A-2006-380-A	CAPSTAN C.O.C BOARD, COMPLETE	
164	3-364-135-01	RETAINER (S), THRUST	
165	X-3356-622-1	CHASSIS (C) ASSY, MECHANICAL	
166	3-356-605-01	SPRING, COMPRESSION	
167	3-356-609-01	GEAR (LOADING)	
168	3-356-703-01	GEAR (COMMUNICATION C)	
169	3-356-607-01	PULLEY (MODE)	
170	3-356-603-01	BELT (MODE)	
171	3-356-616-01	GEAR (LOADING CAM)	
172	3-356-624-01	SPRING, TENSION	

Ref. No.	Part No.	Description	Remark
173	3-356-653-01	SLIDER (PAUSE)	
* 174	X-3356-606-1	LEVER (LOADING) ASSY	
175	3-356-630-01	ROLLER (LOADING)	
176	3-558-708-11	WASHER, STOPPER	
177	3-356-654-01	GEAR (MODE CAM C)	
178	3-356-606-01	GEAR (MODE)	
179	3-356-617-01	LEVER (SELECTION)	
180	3-356-613-01	LEVER (MODE)	
181	3-669-465-01	WASHER (1.5), STOPPER	
182	3-356-702-01	GEAR (COMMUNICATION B)	
183	3-363-804-01	SCREW (+P 2.6X6.5)	
* 184	X-3356-616-1	BRACKET (MOTOR D) ASSY	
185	3-356-707-01	SCREW (+PTPWH 2X25)	
* 186	1-632-740-11	MD BOARD	
187	3-355-801-01	SCREW (BTP 2X18)	
IC1001	8-749-920-97	IC GP2S22B	
IC1002	8-749-920-97	IC GP2S22B	
M1001	X-3356-638-1	MOTOR (REEL R) ASSY	
M1002	X-3356-604-1	MOTOR (ASSIST) ASSY	
S1001	1-466-238-11	ENCODER, ROTARY	

AUDIO

SECTION 7
ELECTRICAL PARTS LIST

Consisting the following section in the audio (AUDIO (A)/(B)/(C)/(D), DOLBY S)

NOTE:

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- RESISTORS
  All resistors are in ohms
  METAL: Metal-film resistor
  METAL OXIDE: Metal Oxide-film resistor
  F : nonflammable
- SEMICONDUCTORS
  In each case, u: μ , for example:
  uA...: μA..., uPA...: μPA..., uPB...: μPB..., uPC...: μPC..., uPD...: μPD...
- CAPACITORS
  uF : μF
- COILS
  uH : μH
- Abbreviation
  CND : Canadian model

Ref.No.	Part No.	Description			Remark
*	A-2007-395-A	AUDIO BOARD, COMPLETE (E)			
		**********			
*	A-2007-397-A	AUDIO BOARD, COMPLETE (US, CND)			
		**********			
		(Including AUDIO (A)/(B)/(C)/(D), DOLBY S BOARD)			
*	1-537-473-11	TERMINAL (LEAD PIN)			
	2-259-121-01	SCREW, TR			
*	4-942-204-01	PLATE, GROUND			
		< CAPACITOR >			
C1	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C2	1-135-177-21	TANTALUM CHIP	1uF	20%	20V
C3	1-137-301-11	FILM CHIP	0.039uF	5%	16V
C4	1-163-007-11	CERAMIC CHIP	680PF	10%	50V
C5	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C6	1-164-717-11	CERAMIC CHIP	0.0082uF	5%	50V
C7	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C8	1-104-562-11	FILM CHIP	0.082uF	5%	16V
C9	1-104-553-11	FILM CHIP	0.015uF	5%	16V
C10	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C11	1-135-145-11	TANTALUM CHIP	0.47uF	10%	35V
C12	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C13	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C14	1-162-568-11	CERAMIC CHIP	0.33uF	10%	16V
C15	1-104-562-11	FILM CHIP	0.082uF	5%	16V
C16	1-135-145-11	TANTALUM CHIP	0.47uF	10%	35V
C17	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C18	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C19	1-163-035-00	CERAMIC CHIP	0.047uF		50V
C20	1-104-553-11	FILM CHIP	0.015uF	5%	16V
C21	1-164-717-11	CERAMIC CHIP	0.0082uF	5%	50V
C22	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
C23	1-164-161-11	CERAMIC CHIP	0.0022uF	10%	100V
C24	1-163-005-11	CERAMIC CHIP	470PF	10%	50V
C25	1-163-012-00	CERAMIC CHIP	0.0018uF	10%	50V
C26	1-137-301-11	FILM CHIP	0.039uF	5%	16V
C27	1-163-012-00	CERAMIC CHIP	0.0018uF	10%	50V
C28	1-163-012-00	CERAMIC CHIP	0.0018uF	10%	50V
C29	1-137-306-11	FILM CHIP	0.1uF	5%	16V
C30	1-135-145-11	TANTALUM CHIP	0.47uF	10%	35V
C31	1-104-555-11	FILM CHIP	0.022uF	5%	16V
C32	1-104-563-11	FILM CHIP	0.1uF	5%	16V
C33	1-163-024-00	CERAMIC CHIP	0.018uF	10%	50V
C34	1-137-306-11	FILM CHIP	0.1uF	5%	16V
C35	1-163-012-00	CERAMIC CHIP	0.0018uF	10%	50V
C36	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C37	1-164-222-11	CERAMIC CHIP	0.22uF		25V
C38	1-163-989-11	CERAMIC CHIP	0.033uF	10%	25V
C39	1-104-555-11	FILM CHIP	0.022uF	5%	16V
C40	1-137-306-11	FILM CHIP	0.1uF	5%	16V
C101	1-130-893-00	FILM	0.027uF	5%	100V
C102	1-124-916-11	ELECT	22uF	20%	63V
C103	1-124-916-11	ELECT	22uF	20%	63V
C104	1-130-893-00	FILM	0.027uF	5%	100V
C105	1-136-253-11	FILM	0.0018uF	5%	100V
C106	1-107-161-00	MICA	39PF	5%	500V
C107	1-136-253-11	FILM	0.0018uF	5%	100V
C108	1-130-475-00	MYLAR	0.0022uF	5%	50V
C109	1-130-475-00	MYLAR	0.0022uF	5%	50V
C110	1-130-478-00	MYLAR	0.0039uF	5%	50V
C111	1-136-173-00	FILM	0.47uF	5%	50V
C112	1-136-167-00	FILM	0.15uF	5%	50V
C113	1-136-155-00	FILM	0.015uF	5%	50V
C114	1-124-903-11	ELECT	1uF	20%	50V
C115	1-136-169-00	FILM	0.22uF	5%	50V
C116	1-136-163-00	FILM	0.068uF	5%	50V
C117	1-136-162-00	FILM	0.056uF	5%	50V
C118	1-124-903-11	ELECT	1uF	20%	50V
C119	1-130-480-00	MYLAR	0.0056uF	5%	50V
C120	1-136-153-00	FILM	0.01uF	5%	50V
C121	1-124-916-11	ELECT	22uF	20%	63V
C122	1-124-916-11	ELECT	22uF	20%	63V
C123	1-124-916-11	ELECT	22uF	20%	63V
C124	1-126-059-11	ELECT	10uF	20%	50V
C125	1-124-916-11	ELECT	22uF	20%	63V
C126	1-124-916-11	ELECT	22uF	20%	63V
C127	1-124-916-11	ELECT	22uF	20%	63V
C132	1-126-059-11	ELECT	10uF	20%	50V
C133	1-124-927-11	ELECT	4.7uF	20%	100V
C134	1-124-927-11	ELECT	4.7uF	20%	100V
C135	1-124-927-11	ELECT	4.7uF	20%	100V
C137	1-130-475-00	MYLAR	0.0022uF	5%	50V
C138	1-130-475-00	MYLAR	0.0022uF	5%	50V

Ref. No.	Part No.	Description				Remark
C139	1-130-478-00	MYLAR	0.0039uF	5%		50V
C140	1-136-173-00	FILM	0.47uF	5%		50V
C141	1-136-167-00	FILM	0.15uF	5%		50V
C142	1-136-155-00	FILM	0.015uF	5%		50V
C143	1-124-903-11	ELECT	1uF	20%		50V
C144	1-136-169-00	FILM	0.22uF	5%		50V
C145	1-136-163-00	FILM	0.068uF	5%		50V
C146	1-136-162-00	FILM	0.056uF	5%		50V
C147	1-124-903-11	ELECT	1uF	20%		50V
C148	1-130-480-00	MYLAR	0.0056uF	5%		50V
C149	1-136-153-00	FILM	0.01uF	5%		50V
C150	1-126-059-11	ELECT	10uF	20%		50V
C151	1-126-059-11	ELECT	10uF	20%		50V
C152	1-124-916-11	ELECT	22uF	20%		63V
C153	1-126-059-11	ELECT	10uF	20%		50V
C154	1-124-916-11	ELECT	22uF	20%		63V
C155	1-124-916-11	ELECT	22uF	20%		63V
C158	1-106-347-00	MYLAR	1500PF	5%		200V
C159	1-126-059-11	ELECT	10uF	20%		50V
C160	1-130-493-00	MYLAR	0.068uF	5%		50V
C161	1-130-485-00	MYLAR	0.015uF	5%		50V
C162	1-130-489-00	MYLAR	0.033uF	5%		50V
C163	1-130-485-00	MYLAR	0.015uF	5%		50V
C164	1-130-490-11	MYLAR	0.039uF	5%		50V
C165	1-130-486-00	MYLAR	0.018uF	10%		50V
C166	1-124-916-11	ELECT	22uF	20%		63V
C167	1-136-252-00	FILM	0.0015uF	5%		100V
C168	1-107-597-11	MICA	22PF	5%		500V
C169	1-136-157-00	FILM	0.022uF	5%		50V
C170	1-136-161-00	FILM	0.047uF	5%		50V
C171	1-110-341-11	MYLAR	330PF	5%		50V
C172	1-136-803-11	FILM	560PF	5%		630V
C173	1-107-611-11	MICA	100PF	5%		500V
C174	1-136-153-00	FILM	0.01uF	5%		50V
C176	1-124-925-11	ELECT	2.2uF	20%		100V
C178	1-126-059-11	ELECT	10uF	20%		50V
C180	1-124-916-11	ELECT	22uF	20%		63V
C201	1-130-893-00	FILM	0.027uF	5%		100V
C202	1-124-916-11	ELECT	22uF	20%		63V
C203	1-124-916-11	ELECT	22uF	20%		63V
C204	1-130-893-00	FILM	0.027uF	5%		100V
C205	1-136-253-11	FILM	0.0018uF	5%		100V
C206	1-107-161-00	MICA	39PF	5%		500V
C207	1-136-253-11	FILM	0.0018uF	5%		100V
C208	1-130-475-00	MYLAR	0.0022uF	5%		50V
C209	1-130-475-00	MYLAR	0.0022uF	5%		50V
C210	1-130-478-00	MYLAR	0.0039uF	5%		50V
C211	1-136-173-00	FILM	0.47uF	5%		50V
C212	1-136-167-00	FILM	0.15uF	5%		50V
C213	1-136-155-00	FILM	0.015uF	5%		50V

Ref. No.	Part No.	Description				Remark
C214	1-124-903-11	ELECT	1uF	20%		50V
C215	1-136-169-00	FILM	0.22uF	5%		50V
C216	1-136-163-00	FILM	0.068uF	5%		50V
C217	1-136-162-00	FILM	0.056uF	5%		50V
C218	1-124-903-11	ELECT	1uF	20%		50V
C219	1-130-480-00	MYLAR	0.0056uF	5%		50V
C220	1-136-153-00	FILM	0.01uF	5%		50V
C221	1-124-916-11	ELECT	22uF	20%		63V
C222	1-124-916-11	ELECT	22uF	20%		63V
C223	1-124-916-11	ELECT	22uF	20%		63V
C224	1-126-059-11	ELECT	10uF	20%		50V
C225	1-124-916-11	ELECT	22uF	20%		63V
C226	1-124-916-11	ELECT	22uF	20%		63V
C227	1-124-916-11	ELECT	22uF	20%		63V
C232	1-126-059-11	ELECT	10uF	20%		50V
C233	1-124-927-11	ELECT	4.7uF	20%		100V
C234	1-124-927-11	ELECT	4.7uF	20%		100V
C235	1-124-927-11	ELECT	4.7uF	20%		100V
C237	1-130-475-00	MYLAR	0.0022uF	5%		50V
C238	1-130-475-00	MYLAR	0.0022uF	5%		50V
C239	1-130-478-00	MYLAR	0.0039uF	5%		50V
C240	1-136-173-00	FILM	0.47uF	5%		50V
C241	1-136-167-00	FILM	0.15uF	5%		50V
C242	1-136-155-00	FILM	0.015uF	5%		50V
C243	1-124-903-11	ELECT	1uF	20%		50V
C244	1-136-169-00	FILM	0.22uF	5%		50V
C245	1-136-163-00	FILM	0.068uF	5%		50V
C246	1-136-162-00	FILM	0.056uF	5%		50V
C247	1-124-903-11	ELECT	1uF	20%		50V
C248	1-130-480-00	MYLAR	0.0056uF	5%		50V
C249	1-136-153-00	FILM	0.01uF	5%		50V
C250	1-126-059-11	ELECT	10uF	20%		50V
C251	1-126-059-11	ELECT	10uF	20%		50V
C252	1-124-916-11	ELECT	22uF	20%		63V
C253	1-126-059-11	ELECT	10uF	20%		50V
C254	1-124-916-11	ELECT	22uF	20%		63V
C255	1-124-916-11	ELECT	22uF	20%		63V
C258	1-106-347-00	MYLAR	1500PF	5%		200V
C259	1-126-059-11	ELECT	10uF	20%		50V
C260	1-130-493-00	MYLAR	0.068uF	5%		50V
C261	1-130-485-00	MYLAR	0.015uF	5%		50V
C262	1-130-489-00	MYLAR	0.033uF	5%		50V
C263	1-130-485-00	MYLAR	0.015uF	5%		50V
C264	1-130-490-11	MYLAR	0.039uF	5%		50V
C265	1-130-486-00	MYLAR	0.018uF	10%		50V
C266	1-124-916-11	ELECT	22uF	20%		63V
C267	1-136-252-00	FILM	0.0015uF	5%		100V
C268	1-107-597-11	MICA	22PF	5%		500V
C269	1-136-157-00	FILM	0.022uF	5%		50V
C270	1-136-161-00	FILM	0.047uF	5%		50V

AUDIO

Ref. No.	Part No.	Description			Remark
C271	1-110-341-11	MYLAR	330PF	5%	50V
C272	1-136-803-11	FILM	560PF	5%	630V
C273	1-107-611-11	MICA	100PF	5%	500V
C274	1-136-153-00	FILM	0.01uF	5%	50V
C276	1-124-925-11	ELECT	2.2uF	20%	100V
C278	1-126-059-11	ELECT	10uF	20%	50V
C280	1-124-916-11	ELECT	22uF	20%	63V
C501	1-126-066-11	ELECT	470uF	20%	63V
C502	1-126-066-11	ELECT	470uF	20%	63V
C503	1-107-601-11	MICA	33PF	5%	500V
C504	1-107-601-11	MICA	33PF	5%	500V
C505	1-124-122-11	ELECT	100uF	20%	50V
C506	1-136-153-00	FILM	0.01uF	5%	50V
C507	1-136-153-00	FILM	0.01uF	5%	50V
C508	1-124-922-11	ELECT	1000uF	20%	63V
C509	1-124-922-11	ELECT	1000uF	20%	63V
C510	1-126-059-11	ELECT	10uF	20%	50V
C511	1-126-059-11	ELECT	10uF	20%	50V
C513	1-126-059-11	ELECT	10uF	20%	50V
C514	1-126-059-11	ELECT	10uF	20%	50V
C515	1-164-159-11	CERAMIC	0.1uF		50V
C516	1-124-902-00	ELECT	0.47uF	20%	50V
C518	1-126-059-11	ELECT	10uF	20%	50V
C519	1-126-059-11	ELECT	10uF	20%	50V
C522	1-124-927-11	ELECT	4.7uF	20%	100V
C523	1-124-927-11	ELECT	4.7uF	20%	100V
C526	1-126-059-11	ELECT	10uF	20%	50V
C527	1-126-059-11	ELECT	10uF	20%	50V
C529	1-124-907-11	ELECT	10uF	20%	50V
C530	1-126-059-11	ELECT	10uF	20%	50V
C531	1-126-059-11	ELECT	10uF	20%	50V
C532	1-124-925-11	ELECT	2.2uF	20%	100V
C533	1-126-059-11	ELECT	10uF	20%	50V
C534	1-124-477-11	ELECT	47uF	20%	25V
C535	1-136-161-00	FILM	0.047uF	5%	50V
C536	1-124-907-11	ELECT	10uF	20%	50V
C537	1-124-925-11	ELECT	2.2uF	20%	100V
C538	1-162-282-31	CERAMIC	100PF	10%	50V
C539	1-136-228-11	FILM	0.0012uF	5%	100V
C540	1-136-228-11	FILM	0.0012uF	5%	100V
C541	1-136-233-11	FILM	0.0047uF	5%	100V
C542	1-124-907-11	ELECT	10uF	20%	50V
C543	1-136-559-11	FILM	0.0047uF	5%	630V
C544	1-107-584-11	CERAMIC	4PF	0.25PF	500V
C545	1-124-907-11	ELECT	10uF	20%	50V
C548	1-126-059-11	ELECT	10uF	20%	50V
C549	1-126-059-11	ELECT	10uF	20%	50V
C585	1-124-902-00	ELECT	0.47uF	20%	50V
C586	1-164-159-11	CERAMIC	0.1uF		50V
C587	1-164-159-11	CERAMIC	0.1uF		50V

Ref. No.	Part No.	Description			Remark
C599	1-162-302-11	CERAMIC	0.0022uF	20%	16V
		< CONNECTOR >			
CN501	1-764-817-11	CONNECTOR, BOARD TO BOARD 8P			
* CN502	1-560-062-00	PIN, CONNECTOR 4P			
CN503	1-691-767-11	PLUG (MICRO CONNECTOR) 5P			
* CN504	1-564-519-11	PLUG, CONNECTOR 4P			
CN505	1-564-523-11	PLUG, CONNECTOR 8P			
CN506	1-691-765-11	PLUG (MICRO CONNECTOR) 3P			
CN507	1-691-770-11	PLUG (MICRO CONNECTOR) 8P			
* CN508	1-560-062-00	PIN, CONNECTOR 4P			
* CN509	1-560-061-00	PIN, CONNECTOR 3P			
* CN510	1-568-937-21	PIN, CONNECTOR 10P			
* CN511	1-568-935-11	PIN, CONNECTOR 8P			
CN512	1-506-468-11	PIN, CONNECTOR 3P			
CN513	1-506-468-11	PIN, CONNECTOR 3P			
CN705	1-691-765-11	PLUG (MICRO CONNECTOR) 3P			
CNP505	1-691-768-11	PLUG (MICRO CONNECTOR) 6P			
		< FILTER >			
CP103	1-236-087-11	FILTER, LOW PASS			
CP203	1-236-087-11	FILTER, LOW PASS			
		< DIODE >			
D101	8-719-987-63	DIODE	1N4148M		
D102	8-719-987-63	DIODE	1N4148M		
D104	8-719-987-63	DIODE	1N4148M		
D108	8-719-987-63	DIODE	1N4148M		
D109	8-719-987-63	DIODE	1N4148M		
D201	8-719-987-63	DIODE	1N4148M		
D202	8-719-987-63	DIODE	1N4148M		
D204	8-719-987-63	DIODE	1N4148M		
D208	8-719-987-63	DIODE	1N4148M		
D209	8-719-987-63	DIODE	1N4148M		
D501	8-719-933-41	DIODE	HZS6C3L		
D504	8-719-987-63	DIODE	1N4148M		
D507	8-719-987-63	DIODE	1N4148M		
D508	8-719-000-81	DIODE	UZL-7L3		
D509	8-719-000-81	DIODE	UZL-7L3		
D516	8-719-000-81	DIODE	UZL-7L3		
D517	8-719-000-81	DIODE	UZL-7L3		
D520	8-719-987-63	DIODE	1N4148M		
D521	8-719-987-63	DIODE	1N4148M		
D522	8-719-987-63	DIODE	1N4148M		
D523	8-719-987-63	DIODE	1N4148M		
D524	8-719-987-63	DIODE	1N4148M		
		< IC >			
IC1	8-752-056-51	IC	CXA1417Q		
IC2	8-759-711-85	IC	NJM4580E-D		

Ref. No.	Part No.	Description	Remark
IC501	8-759-602-01	IC M5220P	
IC502	8-752-018-80	IC CX20188	
IC505	8-759-711-35	IC NJM4580D	
IC506	8-759-634-51	IC M5218AP	
IC510	8-759-711-35	IC NJM4580D	
IC511	8-752-018-80	IC CX20188	
IC513	8-759-711-35	IC NJM4580D	
IC514	8-759-106-56	IC uPC1297CA	
IC516	8-759-634-51	IC M5218AP	
IC517	8-759-634-51	IC M5218AP	
		< JACK >	
J501	1-507-796-71	JACK (HEADPHONES)	
* J502	1-573-142-31	JACK, PIN 4P (LINE IN/OUT)	
		< COIL >	
L101	1-408-927-11	INDUCTOR 18mH	
L102	1-408-920-00	INDUCTOR 4.7mH	
L103	1-408-918-11	INDUCTOR 3.3mH	
L104	1-408-916-11	INDUCTOR 2.2mH	
L105	1-408-929-00	INDUCTOR 27mH	
L106	1-410-769-31	INDUCTOR 3.3mH	
L201	1-408-927-11	INDUCTOR 18mH	
L202	1-408-920-00	INDUCTOR 4.7mH	
L203	1-408-918-11	INDUCTOR 3.3mH	
L204	1-408-916-11	INDUCTOR 2.2mH	
L205	1-408-929-00	INDUCTOR 27mH	
L206	1-410-769-31	INDUCTOR 3.3mH	
		< TRANSISTOR >	
Q101	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q102	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q103	8-729-203-06	TRANSISTOR 2SK30A-GR2	
Q104	8-729-203-06	TRANSISTOR 2SK30A-GR2	
Q106	8-729-203-06	TRANSISTOR 2SK30A-GR2	
Q107	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q109	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q110	8-729-203-06	TRANSISTOR 2SK30A-GR2	
Q111	8-729-203-06	TRANSISTOR 2SK30A-GR2	
Q112	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q113	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q114	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q115	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q116	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q117	8-729-900-80	TRANSISTOR DTC114ES	
Q131	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q201	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q202	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q203	8-729-203-06	TRANSISTOR 2SK30A-GR2	
Q204	8-729-203-06	TRANSISTOR 2SK30A-GR2	

Ref. No.	Part No.	Description	Remark
Q206	8-729-203-06	TRANSISTOR 2SK30A-GR2	
Q207	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q209	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q210	8-729-203-06	TRANSISTOR 2SK30A-GR2	
Q211	8-729-203-06	TRANSISTOR 2SK30A-GR2	
Q212	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q213	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q214	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q215	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q216	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q217	8-729-900-80	TRANSISTOR DTC114ES	
Q231	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q501	8-729-107-53	TRANSISTOR 2SC2275A	
Q502	8-729-141-10	TRANSISTOR 2SA985A-QP	
Q503	8-729-224-62	TRANSISTOR 2SK246-GR	
Q504	8-729-224-62	TRANSISTOR 2SK246-GR	
Q505	8-729-366-62	TRANSISTOR 2SD666-C	
Q506	8-729-364-62	TRANSISTOR 2SB646-C	
Q507	8-729-366-62	TRANSISTOR 2SD666-C	
Q508	8-729-364-62	TRANSISTOR 2SB646-C	
Q509	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q512	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q513	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q514	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q515	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q516	8-729-900-89	TRANSISTOR DTC144ES	
Q517	8-729-900-89	TRANSISTOR DTC144ES	
Q518	8-729-900-89	TRANSISTOR DTC144ES	
Q521	8-729-900-61	TRANSISTOR DTA114ES	
Q522	8-729-900-80	TRANSISTOR DTC114ES	
Q523	8-729-900-80	TRANSISTOR DTC114ES	
Q524	8-729-900-80	TRANSISTOR DTC114ES	
Q525	8-729-900-80	TRANSISTOR DTC114ES	
Q526	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q527	8-729-194-57	TRANSISTOR 2SC945-P	
Q528	8-729-194-57	TRANSISTOR 2SC945-P	
Q529	8-729-900-65	TRANSISTOR DTA144ES	
Q530	8-729-900-80	TRANSISTOR DTC114ES	
Q531	8-729-900-61	TRANSISTOR DTA114ES	
Q532	8-729-900-80	TRANSISTOR DTC114ES	
Q533	8-729-900-80	TRANSISTOR DTC114ES	
		< RESISTOR >	
R1	1-216-615-11	METAL CHIP 33 0.5% 1/10W	
R2	1-208-806-11	METAL GLAZE 10K 2% 1/10W	
R3	1-208-812-11	METAL GLAZE 18K 2% 1/10W	
R4	1-208-556-41	METAL GLAZE 820K 2% 1/10W	
R5	1-208-799-11	METAL GLAZE 5.1K 2% 1/10W	
R6	1-208-787-11	METAL GLAZE 1.6K 2% 1/10W	
R7	1-216-657-11	METAL CHIP 1.8K 0.5% 1/10W	

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Ref. No.	Part No.	Description				Remark
R8	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W	
R9	1-208-791-11	METAL GLAZE	2.4K	2%	1/10W	
R10	1-208-440-41	METAL GLAZE	1.3K	2%	1/10W	
R11	1-216-615-11	METAL CHIP	33	0.5%	1/10W	
R12	1-216-619-11	METAL CHIP	47	0.5%	1/10W	
R13	1-208-784-11	METAL GLAZE	1.2K	2%	1/10W	
R14	1-216-667-11	METAL CHIP	4.7K	0.5%	1/10W	
R15	1-208-791-11	METAL GLAZE	2.4K	2%	1/10W	
R16	1-216-615-11	METAL CHIP	33	0.5%	1/10W	
R17	1-216-619-11	METAL CHIP	47	0.5%	1/10W	
R18	1-216-657-11	METAL CHIP	1.8K	0.5%	1/10W	
R19	1-208-787-11	METAL GLAZE	1.6K	2%	1/10W	
R20	1-208-799-11	METAL GLAZE	5.1K	2%	1/10W	
R21	1-208-556-41	METAL CHIP	820K	2%	1/10W	
R22	1-216-655-11	METAL CHIP	1.5K	0.5%	1/10W	
R23	1-216-678-11	METAL CHIP	13K	0.5%	1/10W	
R24	1-216-673-11	METAL CHIP	8.2K	0.5%	1/10W	
R25	1-208-806-11	METAL GLAZE	10K	2%	1/10W	
R26	1-216-676-11	METAL CHIP	11K	0.5%	1/10W	
R27	1-208-799-11	METAL GLAZE	5.1K	2%	1/10W	
R28	1-216-695-11	METAL CHIP	68K	0.5%	1/10W	
R29	1-208-799-11	METAL GLAZE	5.1K	2%	1/10W	
R30	1-208-791-11	METAL GLAZE	2.4K	2%	1/10W	
R31	1-208-811-11	METAL GLAZE	16K	2%	1/10W	
R32	1-216-685-11	METAL CHIP	27K	0.5%	1/10W	
R33	1-208-813-11	METAL GLAZE	20K	2%	1/10W	
R34	1-216-684-11	METAL CHIP	24K	0.5%	1/10W	
R35	1-208-817-11	METAL GLAZE	30K	2%	1/10W	
R36	1-208-817-11	METAL GLAZE	30K	2%	1/10W	
R37	1-216-676-11	METAL CHIP	11K	0.5%	1/10W	
R38	1-208-819-11	METAL GLAZE	36K	2%	1/10W	
R39	1-208-799-11	METAL GLAZE	5.1K	2%	1/10W	
R40	1-208-817-11	METAL GLAZE	30K	2%	1/10W	
R41	1-208-811-11	METAL GLAZE	16K	2%	1/10W	
R42	1-216-673-11	METAL CHIP	8.2K	0.5%	1/10W	
R43	1-216-676-11	METAL CHIP	11K	0.5%	1/10W	
R44	1-216-689-11	METAL CHIP	39K	0.5%	1/10W	
R45	1-216-689-11	METAL CHIP	39K	0.5%	1/10W	
R51	1-208-800-11	METAL GLAZE	5.6K	2%	1/10W	
R52	1-216-663-11	METAL CHIP	3.3K	0.5%	1/10W	
R55	1-208-789-11	METAL GLAZE	2K	2%	1/10W	
R101	1-249-466-11	CARBON	56K	5%	1/4W	
R102	1-249-531-11	CARBON	130	5%	1/4W	
R103	1-247-146-00	CARBON	4.3K	5%	1/4W	
R104	1-249-602-11	CARBON	120K	5%	1/4W	
R105	1-249-465-11	CARBON	47K	5%	1/4W	
R106	1-247-717-11	CARBON	2.2K	5%	1/4W	F
R107	1-247-138-00	CARBON	2K	5%	1/4W	
R108	1-249-429-11	CARBON	10K	5%	1/4W	
R109	1-247-717-11	CARBON	2.2K	5%	1/4W	F
R110	1-247-152-00	CARBON	8.2K	5%	1/4W	
R111	1-247-710-11	CARBON	560	5%	1/4W	F
R112	1-247-725-11	CARBON	10K	5%	1/4W	F
R113	1-249-932-11	CARBON	2.4K	1%	1/4W	
R114	1-249-938-91	CARBON	4.3K	1%	1/4W	
R115	1-259-500-11	CARBON	1M	5%	1/6W	
R116	1-247-710-11	CARBON	560	5%	1/4W	F
R117	1-249-462-11	CARBON	22K	5%	1/4W	
R118	1-259-449-11	CARBON	7.5K	5%	1/6W	
R119	1-259-424-11	CARBON	680	5%	1/6W	
R120	1-259-451-11	CARBON	9.1K	5%	1/6W	
R121	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R122	1-249-973-11	CARBON	120K	1%	1/4W	
R123	1-249-951-11	CARBON	15K	1%	1/4W	
R124	1-249-949-11	CARBON	12K	1%	1/4W	
R125	1-249-927-11	CARBON	1.5K	1%	1/4W	
R128	1-249-465-11	CARBON	47K	5%	1/4W	
R129	1-247-716-11	CARBON	1.8K	5%	1/4W	F
R130	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R131	1-249-465-11	CARBON	47K	5%	1/4W	
R132	1-247-725-11	CARBON	10K	5%	1/4W	F
R133	1-215-438-00	METAL	5.1K	1%	1/4W	
R134	1-249-465-11	CARBON	47K	5%	1/4W	
R135	1-247-725-11	CARBON	10K	5%	1/4W	F
R136	1-249-465-11	CARBON	47K	5%	1/4W	
R137	1-247-700-11	CARBON	100	5%	1/4W	F
R138	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R139	1-247-713-11	CARBON	1K	5%	1/4W	F
R140	1-247-713-11	CARBON	1K	5%	1/4W	F
R144	1-247-725-11	CARBON	10K	5%	1/4W	F
R145	1-247-718-11	CARBON	2.7K	5%	1/4W	F
R146	1-249-462-11	CARBON	22K	5%	1/4W	
R147	1-247-704-11	CARBON	220	5%	1/4W	F
R148	1-247-700-11	CARBON	100	5%	1/4W	F
R149	1-249-586-11	CARBON	27K	5%	1/4W	
R150	1-249-469-11	CARBON	100K	5%	1/4W	
R151	1-247-723-11	CARBON	6.8K	5%	1/4W	F
R152	1-247-720-11	CARBON	3.9K	5%	1/4W	F
R153	1-247-152-00	CARBON	7.5K	5%	1/4W	
R154	1-249-465-11	CARBON	47K	5%	1/4W	
R155	1-249-465-11	CARBON	47K	5%	1/4W	
R156	1-247-128-00	CARBON	750	5%	1/4W	
R157	1-247-725-11	CARBON	10K	5%	1/4W	F
R158	1-249-932-11	CARBON	2.4K	1%	1/4W	
R159	1-249-938-91	CARBON	4.3K	1%	1/4W	
R160	1-259-500-11	CARBON	1M	5%	1/6W	
R161	1-247-710-11	CARBON	560	5%	1/4W	F
R162	1-249-462-11	CARBON	22K	5%	1/4W	
R163	1-259-449-11	CARBON	7.5K	5%	1/6W	
R164	1-259-424-11	CARBON	680	5%	1/6W	

Ref.No.	Part No.	Description				Remark
R165	1-259-451-11	CARBON	9.1K	5%	1/6W	
R166	1-249-469-11	CARBON	100K	5%	1/4W	
R167	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R168	1-249-955-11	CARBON	22K	1%	1/4W	
R169	1-249-955-11	CARBON	22K	1%	1/4W	
R170	1-249-935-11	CARBON	3.3K	1%	1/4W	
R171	1-249-935-11	CARBON	3.3K	1%	1/4W	
R172	1-249-469-11	CARBON	100K	5%	1/4W	
R173	1-249-465-11	CARBON	47K	5%	1/4W	
R179	1-247-719-11	CARBON	3.3K	5%	1/4W	F
R180	1-247-723-11	CARBON	6.8K	5%	1/4W	F
R181	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R182	1-249-590-11	CARBON	39K	5%	1/4W	
R183	1-249-429-11	CARBON	10K	5%	1/4W	
R184	1-249-465-11	CARBON	47K	5%	1/4W	
R185	1-249-556-11	CARBON	1.5K	5%	1/4W	
R186	1-259-474-11	CARBON	82K	5%	1/6W	
R187	1-249-962-11	CARBON	43K	1%	1/4W	
R188	1-249-531-11	CARBON	130	5%	1/4W	
R190	1-247-701-11	CARBON	120	5%	1/4W	F
R191	1-249-462-11	CARBON	22K	5%	1/4W	
R192	1-247-721-11	CARBON	4.7K	5%	1/4W	F
R193	1-247-700-11	CARBON	100	5%	1/4W	F
R194	1-247-152-00	CARBON	8.2K	5%	1/4W	
R195	1-247-721-11	CARBON	4.7K	5%	1/4W	F
R196	1-249-429-11	CARBON	10K	5%	1/4W	
R197	1-249-429-11	CARBON	10K	5%	1/4W	
R198	1-249-429-11	CARBON	10K	5%	1/4W	
R199	1-247-718-11	CARBON	2.7K	5%	1/4W	F
R201	1-249-466-11	CARBON	56K	5%	1/4W	
R202	1-249-531-11	CARBON	130	5%	1/4W	
R203	1-247-146-00	CARBON	4.3K	5%	1/4W	
R204	1-249-602-11	CARBON	120K	5%	1/4W	
R205	1-249-465-11	CARBON	47K	5%	1/4W	
R206	1-247-717-11	CARBON	2.2K	5%	1/4W	F
R207	1-247-138-00	CARBON	2K	5%	1/4W	
R208	1-249-429-11	CARBON	10K	5%	1/4W	
R209	1-247-717-11	CARBON	2.2K	5%	1/4W	F
R210	1-247-152-00	CARBON	8.2K	5%	1/4W	
R211	1-247-710-11	CARBON	560	5%	1/4W	F
R212	1-247-725-11	CARBON	10K	5%	1/4W	F
R213	1-249-932-11	CARBON	2.4K	1%	1/4W	
R214	1-249-938-91	CARBON	4.3K	1%	1/4W	
R215	1-259-500-11	CARBON	1M	5%	1/6W	
R216	1-247-710-11	CARBON	560	5%	1/4W	F
R217	1-249-462-11	CARBON	22K	5%	1/4W	
R218	1-259-449-11	CARBON	7.5K	5%	1/6W	
R219	1-259-424-11	CARBON	680	5%	1/6W	
R220	1-259-451-11	CARBON	9.1K	5%	1/6W	
R221	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R222	1-249-973-11	CARBON	120K	1%	1/4W	
R223	1-249-951-11	CARBON	15K	1%	1/4W	
R224	1-249-949-11	CARBON	12K	1%	1/4W	
R225	1-249-927-11	CARBON	1.5K	1%	1/4W	
R228	1-249-465-11	CARBON	47K	5%	1/4W	
R229	1-247-716-11	CARBON	1.8K	5%	1/4W	F
R230	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R231	1-249-465-11	CARBON	47K	5%	1/4W	
R232	1-247-725-11	CARBON	10K	5%	1/4W	F
R233	1-215-438-00	METAL	5.1K	1%	1/4W	
R234	1-249-465-11	CARBON	47K	5%	1/4W	
R235	1-247-725-11	CARBON	10K	5%	1/4W	F
R236	1-249-465-11	CARBON	47K	5%	1/4W	
R237	1-247-700-11	CARBON	100	5%	1/4W	F
R238	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R239	1-247-713-11	CARBON	1K	5%	1/4W	F
R240	1-247-713-11	CARBON	1K	5%	1/4W	F
R244	1-247-725-11	CARBON	10K	5%	1/4W	F
R245	1-247-718-11	CARBON	2.7K	5%	1/4W	F
R246	1-249-462-11	CARBON	22K	5%	1/4W	
R247	1-247-704-11	CARBON	220	5%	1/4W	F
R248	1-247-700-11	CARBON	100	5%	1/4W	F
R249	1-249-586-11	CARBON	27K	5%	1/4W	
R250	1-249-469-11	CARBON	100K	5%	1/4W	
R251	1-247-723-11	CARBON	6.8K	5%	1/4W	F
R252	1-247-720-11	CARBON	3.9K	5%	1/4W	F
R253	1-247-152-00	CARBON	7.5K	5%	1/4W	
R254	1-249-465-11	CARBON	47K	5%	1/4W	
R255	1-249-465-11	CARBON	47K	5%	1/4W	
R256	1-247-128-00	CARBON	750	5%	1/4W	
R257	1-247-725-11	CARBON	10K	5%	1/4W	F
R258	1-249-932-11	CARBON	2.4K	1%	1/4W	
R259	1-249-938-91	CARBON	4.3K	1%	1/4W	
R260	1-259-500-11	CARBON	1M	5%	1/6W	
R261	1-247-710-11	CARBON	560	5%	1/4W	F
R262	1-249-462-11	CARBON	22K	5%	1/4W	
R263	1-259-449-11	CARBON	7.5K	5%	1/6W	
R264	1-259-424-11	CARBON	680	5%	1/6W	
R265	1-259-451-11	CARBON	9.1K	5%	1/6W	
R266	1-249-469-11	CARBON	100K	5%	1/4W	
R267	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R268	1-249-955-11	CARBON	22K	1%	1/4W	
R269	1-249-955-11	CARBON	22K	1%	1/4W	
R270	1-249-935-11	CARBON	3.3K	1%	1/4W	
R271	1-249-935-11	CARBON	3.3K	1%	1/4W	
R272	1-249-469-11	CARBON	100K	5%	1/4W	
R273	1-249-465-11	CARBON	47K	5%	1/4W	
R279	1-247-719-11	CARBON	3.3K	5%	1/4W	F
R280	1-247-723-11	CARBON	6.8K	5%	1/4W	F
R281	1-249-421-11	CARBON	2.2K	5%	1/4W	F

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Ref. No.	Part No.	Description				Remark
R282	1-249-590-11	CARBON	39K	5%	1/4W	
R283	1-249-429-11	CARBON	10K	5%	1/4W	
R284	1-249-465-11	CARBON	47K	5%	1/4W	
R285	1-249-556-11	CARBON	1.5K	5%	1/4W	
R286	1-259-474-11	CARBON	82K	5%	1/6W	
R287	1-249-962-11	CARBON	43K	1%	1/4W	
R288	1-249-531-11	CARBON	130	5%	1/4W	
R290	1-247-701-11	CARBON	120	5%	1/4W	F
R291	1-249-462-11	CARBON	22K	5%	1/4W	
R292	1-247-721-11	CARBON	4.7K	5%	1/4W	F
R293	1-247-700-11	CARBON	100	5%	1/4W	F
R294	1-247-152-00	CARBON	8.2K	5%	1/4W	
R295	1-247-721-11	CARBON	4.7K	5%	1/4W	F
R296	1-249-429-11	CARBON	10K	5%	1/4W	
R297	1-249-429-11	CARBON	10K	5%	1/4W	
R298	1-249-429-11	CARBON	10K	5%	1/4W	
R299	1-247-718-11	CARBON	2.7K	5%	1/4W	F
R301	1-249-439-11	CARBON	68K	5%	1/4W	
R302	1-249-426-11	CARBON	5.6K	5%	1/4W	
R303	1-247-883-00	CARBON	150K	5%	1/4W	
⚠R304	1-212-857-00	FUSIBLE	10	5%	1/4W	F
R307	1-247-719-11	CARBON	3.3K	5%	1/4W	F
R308	1-249-465-11	CARBON	47K	5%	1/4W	
R309	1-249-963-11	CARBON	47K	1%	1/4W	
R310	1-249-465-11	CARBON	47K	5%	1/4W	
R401	1-249-439-11	CARBON	68K	5%	1/4W	
R402	1-249-426-11	CARBON	5.6K	5%	1/4W	
R403	1-247-883-00	CARBON	150K	5%	1/4W	
⚠R404	1-212-857-00	FUSIBLE	10	5%	1/4W	F
R407	1-247-719-11	CARBON	3.3K	5%	1/4W	F
R408	1-249-465-11	CARBON	47K	5%	1/4W	
R409	1-249-963-11	CARBON	47K	1%	1/4W	
R410	1-249-465-11	CARBON	47K	5%	1/4W	
R501	1-247-704-11	CARBON	220	5%	1/4W	F
R502	1-247-704-11	CARBON	220	5%	1/4W	F
R503	1-247-717-11	CARBON	2.2K	5%	1/4W	F
R504	1-247-717-11	CARBON	2.2K	5%	1/4W	F
R505	1-247-717-11	CARBON	2.2K	5%	1/4W	F
R506	1-249-437-11	CARBON	47K	5%	1/4W	
R507	1-247-706-11	CARBON	330	5%	1/4W	F
R508	1-249-926-11	CARBON	1.3K	5%	1/4W	
R509	1-249-556-11	CARBON	1.5K	5%	1/4W	
R510	1-249-556-11	CARBON	1.5K	5%	1/4W	
R511	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R512	1-249-437-11	CARBON	47K	5%	1/4W	
R514	1-249-429-11	CARBON	10K	5%	1/4W	
R515	1-215-472-00	METAL	130K	1%	1/4W	
R516	1-249-429-11	CARBON	10K	5%	1/4W	
R517	1-249-441-11	CARBON	100K	5%	1/4W	
R518	1-249-417-11	CARBON	1K	5%	1/4W	F

Ref. No.	Part No.	Description				Remark
R519	1-247-885-00	CARBON	180K	5%	1/4W	
R520	1-249-433-11	CARBON	22K	5%	1/4W	
R521	1-249-413-11	CARBON	470	5%	1/4W	F
R522	1-249-413-11	CARBON	470	5%	1/4W	F
R523	1-249-432-11	CARBON	18K	5%	1/4W	
R524	1-249-433-11	CARBON	22K	5%	1/4W	
R525	1-259-436-11	CARBON	2.2K	5%	1/6W	
R526	1-259-436-11	CARBON	2.2K	5%	1/6W	
R527	1-249-437-11	CARBON	47K	5%	1/4W	
R528	1-259-436-11	CARBON	2.2K	5%	1/6W	
R529	1-259-436-11	CARBON	2.2K	5%	1/6W	
R530	1-249-465-11	CARBON	47K	5%	1/4W	
R532	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R533	1-249-437-11	CARBON	47K	5%	1/4W	
R534	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R550	1-249-437-11	CARBON	47K	5%	1/4W	
R551	1-249-437-11	CARBON	47K	5%	1/4W	
R552	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R553	1-249-441-11	CARBON	100K	5%	1/4W	
R554	1-249-414-11	CARBON	560	5%	1/4W	F
R555	1-247-830-11	CARBON	910	5%	1/4W	
R556	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R557	1-249-417-11	CARBON	1K	5%	1/4W	F
R558	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R560	1-249-433-11	CARBON	22K	5%	1/4W	
R561	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R562	1-249-440-11	CARBON	82K	5%	1/4W	
R563	1-249-440-11	CARBON	82K	5%	1/4W	
⚠R564	1-212-853-00	FUSIBLE	6.8	5%	1/4W	F
⚠R565	1-212-853-00	FUSIBLE	6.8	5%	1/4W	F
R566	1-249-381-11	CARBON	1	5%	1/4W	F
R567	1-249-437-11	CARBON	47K	5%	1/4W	
R568	1-215-472-00	METAL	130K	1%	1/4W	
R569	1-249-429-11	CARBON	10K	5%	1/4W	
R570	1-249-429-11	CARBON	10K	5%	1/4W	
R571	1-249-437-11	CARBON	47K	5%	1/4W	
R572	1-249-437-11	CARBON	47K	5%	1/4W	
R573	1-249-425-11	CARBON	4.7K	5%	1/4W	F

< VARIABLE RESISTOR >

RV101	1-228-991-00	RES, ADJ, METAL 2.2K
RV103	1-228-993-00	RES, ADJ, METAL 4.7K
RV104	1-241-765-11	RES, ADJ, CARBON 22K
RV105	1-241-763-11	RES, ADJ, CARBON 4.7K
RV201	1-228-991-00	RES, ADJ, METAL 2.2K
RV203	1-228-993-00	RES, ADJ, METAL 4.7K
RV204	1-241-765-11	RES, ADJ, CARBON 22K
RV205	1-241-763-11	RES, ADJ, CARBON 4.7K
RV501	1-230-344-11	RES, VAR, CARBON 20K/20K (REC LEVEL)
RV504	1-223-797-11	RES, VAR, CARBON 20K/20K (LEVEL)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

Ref.No.	Part No.	Description				Remark
RV505	1-238-019-11	RES, ADJ, CARBON 47K				
RV506	1-241-763-11	RES, ADJ, CARBON 4.7K				
		< TRANSFORMER >				
T101	1-433-379-11	TRANSFORMER, BIAS OSCILLATOR				
T201	1-433-379-11	TRANSFORMER, BIAS OSCILLATOR				
T501	1-433-359-11	TRANSFORMER, BIAS OSCILLATION				
		< TEST PIN >				
* TP501	1-564-506-11	PLUG, CONNECTOR 3P				
* TP502	1-564-505-11	PLUG, CONNECTOR 2P				
**********						
*	A-2006-380-A	CAPSTAN C.O.C BOARD, COMPLETE				
		**********				
		< CAPACITOR >				
C905	1-124-779-00	ELECT CHIP	10uF	20%	16V	
C906	1-135-091-00	TANTALUM CHIP	1uF	20%	16V	
C907	1-163-077-91	CERAMIC CHIP	0.1uF		50V	
C908	1-163-077-91	CERAMIC CHIP	0.1uF		50V	
C909	1-163-077-91	CERAMIC CHIP	0.1uF		50V	
C910	1-163-205-00	CERAMIC CHIP	0.001uF	5%	50V	
C911	1-124-779-00	ELECT CHIP	10uF	20%	16V	
		< HALL ELEMENT >				
H901	8-759-100-96	IC uPC4558G2				
H902	8-759-100-96	IC uPC4558G2				
H903	8-759-100-96	IC uPC4558G2				
		< IC >				
IC902	8-752-064-50	IC CX20174-T6				
		< RESISTOR >				
R907	1-216-242-91	METAL GLAZE	68K	5%	1/8W	
R908	1-216-246-91	METAL GLAZE	100K	5%	1/8W	
R909	1-216-242-91	METAL GLAZE	68K	5%	1/8W	
R910	1-216-238-91	METAL GLAZE	47K	5%	1/8W	
R911	1-216-182-00	METAL GLAZE	220	5%	1/8W	
R912	1-216-182-00	METAL GLAZE	220	5%	1/8W	
R913	1-216-150-00	METAL GLAZE	10	5%	1/8W	
R914	1-216-150-00	METAL GLAZE	10	5%	1/8W	
R915	1-216-150-00	METAL GLAZE	10	5%	1/8W	
**********						

Ref.No.	Part No.	Description				Remark
*	1-632-746-11	COMPARATOR BOARD				
		**********				
		< CAPACITOR >				
C951	1-136-157-00	FILM	0.022uF	5%	50V	
C952	1-124-282-00	ELECT	22uF	20%	25V	
C953	1-124-478-11	ELECT	100uF	20%	25V	
C954	1-124-477-11	ELECT	47uF	20%	25V	
C955	1-162-203-31	CERAMIC	15PF	5%	50V	
C956	1-162-203-31	CERAMIC	15PF	5%	50V	
C957	1-136-159-00	FILM	0.033uF	5%	50V	
		< CONNECTOR >				
* CN951	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P				
* CN952	1-564-518-11	PLUG, CONNECTOR 3P				
		< IC >				
IC951	8-759-145-58	IC uPC4558C				
IC952	8-759-201-58	IC TC9142P				
		< RESISTOR >				
R951	1-249-413-11	CARBON	470	5%	1/4W	F
R952	1-249-413-11	CARBON	470	5%	1/4W	F
R953	1-247-881-00	CARBON	120K	5%	1/4W	
R954	1-247-881-00	CARBON	120K	5%	1/4W	
R955	1-249-429-11	CARBON	10K	5%	1/4W	
R956	1-249-417-11	CARBON	1K	5%	1/4W	F
R957	1-249-417-11	CARBON	1K	5%	1/4W	F
R958	1-247-891-00	CARBON	330K	5%	1/4W	
R959	1-247-901-11	CARBON	820K	5%	1/4W	
R960	1-249-441-11	CARBON	100K	5%	1/4W	
		< VIBRATOR >				
X951	1-760-560-11	VIBRATOR, CRYSTAL (4.9406MHz)				
**********						
*	1-632-740-11	MD BOARD				
		********				
	3-356-631-01	HOLDER (SENSOR)				
		< CONNECTOR >				
CN1001	1-506-615-11	PIN, CONNECTOR 9P				
CN1002	1-564-501-11	PIN, CONNECTOR 8P				
		< IC >				
IC1001	8-749-920-97	IC GP2S22B				
IC1002	8-749-920-97	IC GP2S22B				

MD REEL MOTOR SYSTEM CONTROL

Consisting the following section in the system control (SYSTEM CONTROL (A)/(B)/(C)/(D)/(E)/(F))

Ref.No.	Part No.	Description				Remark
		< RESISTOR >				
R1001	1-249-408-11	CARBON	180	5%	1/4W	F
R1002	1-249-408-11	CARBON	180	5%	1/4W	F
		< SWITCH >				
S1002	1-570-953-11	SWITCH, PUSH (1 KEY) (DOOR)				
S1003	1-571-958-11	SWITCH, PUSH (1 KEY) (CLOSE)				
S1004	1-572-126-11	SWITCH, PUSH (1 KEY) (OPEN)				
S1005	1-572-125-11	SWITCH, LEAF (FWD TAB)				
S1006	1-572-202-11	SWITCH, LEAF (HALF)				
S1007	1-572-125-11	SWITCH, LEAF (METAL)				
S1008	1-572-125-11	SWITCH, LEAF (70u)				
		< TERMINAL >				
* TB1001	1-694-018-11	TERMINAL (5P)				
**********						
*	1-632-741-11	REEL MOTOR BOARD				
		**********				
		< CAPACITOR >				
C1051	1-124-907-11	ELECT	10uF	20%	50V	
C1052	1-124-907-11	ELECT	10uF	20%	50V	
C1053	1-164-159-11	CERAMIC	0.1uF		50V	
		< CONNECTOR >				
* CN1051	1-564-499-11	PIN, CONNECTOR 6P				
* CN1052	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P				
* CN1053	1-564-718-11	PIN, CONNECTOR (SMALL TYPE) 2P				
		< RESISTOR >				
R1051	1-249-412-11	CARBON	390	5%	1/4W	F
**********						
*	A-2007-396-A	SYSTEM CONTROL BOARD, COMPLETE (E)				
		**********				
*	A-2007-398-A	SYSTEM CONTROL BOARD, COMPLETE (US, CND)				
		**********				
		(Including SYSTEM CONTROL (A)/(B)/(C)/(D)/(E)/(F))				
*	1-533-213-31	HOLDER, FUSE				
*	3-309-144-21	HEAT SINK				
*	3-354-927-21	CUSHION				
*	3-356-925-01	HEAT SINK				
*	3-362-478-31	HOLDER (T), LED				
*	3-385-607-01	HOLDER, FL TUBE				
*	4-880-403-11	HEAT SINK				
*	4-942-204-01	PLATE, GROUND				

Ref.No.	Part No.	Description				Remark
		< CAPACITOR >				
C320	1-126-962-11	ELECT	3.3uF	20%	50V	
C321	1-124-916-11	ELECT	22uF	20%	63V	
C322	1-130-478-00	MYLAR	0.0039uF	5%	50V	
C323	1-130-482-00	MYLAR	0.0082uF	5%	50V	
C324	1-130-485-00	MYLAR	0.015uF	5%	50V	
C325	1-130-478-00	MYLAR	0.0039uF	5%	50V	
C326	1-130-482-00	MYLAR	0.0082uF	5%	50V	
C327	1-130-485-00	MYLAR	0.015uF	5%	50V	
C328	1-126-059-11	ELECT	10uF	20%	50V	
C420	1-126-962-11	ELECT	3.3uF	20%	50V	
C421	1-124-916-11	ELECT	22uF	20%	63V	
C422	1-130-478-00	MYLAR	0.0039uF	5%	50V	
C423	1-130-482-00	MYLAR	0.0082uF	5%	50V	
C424	1-130-485-00	MYLAR	0.015uF	5%	50V	
C425	1-130-478-00	MYLAR	0.0039uF	5%	50V	
C426	1-130-482-00	MYLAR	0.0082uF	5%	50V	
C427	1-130-485-00	MYLAR	0.015uF	5%	50V	
C428	1-126-059-11	ELECT	10uF	20%	50V	
C550	1-126-059-11	ELECT	10uF	20%	50V	
C551	1-126-059-11	ELECT	10uF	20%	50V	
C552	1-130-471-00	MYLAR	0.001uF	5%	50V	
C553	1-130-471-00	MYLAR	0.001uF	5%	50V	
C554	1-130-477-00	MYLAR	0.0033uF	5%	50V	
C555	1-130-477-00	MYLAR	0.0033uF	5%	50V	
C556	1-136-157-00	FILM	0.022uF	5%	50V	
C557	1-136-157-00	FILM	0.022uF	5%	50V	
C558	1-124-925-11	ELECT	2.2uF	20%	100V	
C559	1-130-467-00	MYLAR	470PF	5%	50V	
C560	1-130-467-00	MYLAR	470PF	5%	50V	
C561	1-130-476-00	MYLAR	0.0027uF	5%	50V	
C562	1-130-476-00	MYLAR	0.0027uF	5%	50V	
C563	1-130-472-00	MYLAR	0.0012uF	5%	50V	
C564	1-130-472-00	MYLAR	0.0012uF	5%	50V	
C565	1-130-472-00	MYLAR	0.0012uF	5%	50V	
C566	1-130-472-00	MYLAR	0.0012uF	5%	50V	
C567	1-124-925-11	ELECT	2.2uF	20%	100V	
C568	1-124-907-11	ELECT	10uF	20%	50V	
C569	1-124-907-11	ELECT	10uF	20%	50V	
C601	1-164-159-11	CERAMIC	0.1uF		50V	
C602	1-164-159-11	CERAMIC	0.1uF		50V	
C603	1-124-477-11	ELECT	47uF	20%	25V	
C604	1-164-159-11	CERAMIC	0.1uF		50V	
C605	1-164-159-11	CERAMIC	0.1uF		50V	
C606	1-164-159-11	CERAMIC	0.1uF		50V	
⚠C701	1-161-744-51	CERAMIC	0.01uF		400V	
C702	1-136-165-00	FILM	0.1uF	5%	50V	
C703	1-136-177-00	FILM	1uF	5%	50V	
C704	1-104-644-11	ELECT	3300uF	20%	35V	
C705	1-104-644-11	ELECT	3300uF	20%	35V	

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Ref. No.	Part No.	Description			Remark
C706	1-126-972-11	ELECT	1000uF	20%	35V
C707	1-126-937-11	ELECT	4700uF	20%	16V
C708	1-124-122-11	ELECT	100uF	20%	50V
C709	1-162-294-31	CERAMIC	0.001uF	10%	50V
C710	1-162-294-31	CERAMIC	0.001uF	10%	50V
C711	1-109-889-11	ELECT	1uF	20%	50V
C752	1-126-946-11	ELECT	6800uF	20%	25V
C755	1-126-963-11	ELECT	4.7uF	20%	50V
C756	1-124-556-11	ELECT	2200uF	20%	16V
C757	1-126-963-11	ELECT	4.7uF	20%	50V
C758	1-126-963-11	ELECT	4.7uF	20%	50V
C759	1-162-211-31	CERAMIC	33PF	5%	50V
C760	1-126-942-61	ELECT	1000uF	20%	16V
C761	1-124-903-11	ELECT	1uF	20%	50V
C762	1-124-471-00	ELECT	1000uF	20%	6.3V
C765	1-124-907-11	ELECT	10uF	20%	50V
C766	1-124-122-11	ELECT	100uF	20%	50V
C767	1-104-664-11	ELECT	47uF	20%	10V
C768	1-126-963-11	ELECT	4.7uF	20%	50V
C769	1-124-925-11	ELECT	2.2uF	20%	100V
C801	1-124-443-00	ELECT	100uF	20%	10V
C802	1-162-294-31	CERAMIC	0.001uF	10%	50V
C803	1-126-941-11	ELECT	470uF	20%	6.3V
C804	1-164-159-11	CERAMIC	0.1uF		50V
C805	1-161-379-00	CERAMIC	0.01uF	20%	25V
C811	1-162-294-31	CERAMIC	0.001uF	10%	50V
C812	1-162-294-31	CERAMIC	0.001uF	10%	50V
C851	1-124-584-00	ELECT	100uF	20%	10V
C852	1-164-159-11	CERAMIC	0.1uF		50V
C853	1-164-159-11	CERAMIC	0.1uF		50V
C854	1-164-159-11	CERAMIC	0.1uF		50V
C855	1-164-159-11	CERAMIC	0.1uF		50V
C856	1-162-294-31	CERAMIC	0.001uF	10%	50V
C857	1-162-294-31	CERAMIC	0.001uF	10%	50V
C858	1-162-294-31	CERAMIC	0.001uF	10%	50V
C859	1-164-159-11	CERAMIC	0.1uF		50V
C891	1-124-234-00	ELECT	22uF	20%	16V

< CONNECTOR >

* CN701	1-580-230-31	PIN, CONNECTOR (PC BOARD)	2P
CN702	1-568-226-11	PIN, CONNECTOR	2P
CN703	1-564-506-11	PLUG, CONNECTOR	3P
CN704	1-564-511-11	PLUG, CONNECTOR	8P
* CN801	1-568-937-11	PIN, CONNECTOR	10P
* CN802	1-568-934-11	PIN, CONNECTOR	7P
* CN803	1-568-954-11	PIN, CONNECTOR	5P
* CN804	1-568-955-11	PIN, CONNECTOR	6P
* CN805	1-564-342-11	PIN, CONNECTOR	8P
* CN806	1-506-503-11	PIN, CONNECTOR	9P
* CN807	1-564-340-00	PIN, CONNECTOR	6P
CN810	1-506-469-11	PIN, CONNECTOR	4P
CNP501	1-764-810-11	CONNECTOR, BOARD TO BOARD	8P
* CNP511	1-568-935-11	PIN, CONNECTOR	8P
* CNP803	1-568-954-11	PIN, CONNECTOR	5P
* CNP804	1-568-955-11	PIN, CONNECTOR	6P

< COMPOSITION CIRCUIT BLOCK >

CP801	1-236-984-11	COMPOSITION CIRCUIT BLOCK	4.75X11
CP802	1-239-822-11	COMPOSITION CIRCUIT BLOCK	100KX5
CP803	1-236-984-11	COMPOSITION CIRCUIT BLOCK	4.7KX11
CP851	1-239-598-11	COMPOSITION CIRCUIT BLOCK	100KX8
CP852	1-233-252-11	COMPOSITION CIRCUIT BLOCK	100JX4
CP853	1-233-267-11	COMPOSITION CIRCUIT BLOCK	15KX6
CP854	1-233-266-11	COMPOSITION CIRCUIT BLOCK	15KX5

< DIODE >

D120	8-719-000-54	DIODE	UZL-6L3
D121	8-719-987-63	DIODE	1N4148M
D122	8-719-987-63	DIODE	1N4148M
D220	8-719-000-54	DIODE	UZL-6L3
D221	8-719-987-63	DIODE	1N4148M
D222	8-719-987-63	DIODE	1N4148M
D514	8-719-987-63	DIODE	1N4148M
D515	8-719-987-63	DIODE	1N4148M
D601	8-719-987-63	DIODE	1N4148M
D602	8-719-987-63	DIODE	1N4148M
D603	8-719-987-63	DIODE	1N4148M
D604	8-719-987-63	DIODE	1N4148M
D701	8-719-230-02	DIODE	30DF2
D702	8-719-230-02	DIODE	30DF2
D703	8-719-230-02	DIODE	30DF2
D704	8-719-230-02	DIODE	30DF2
D705	8-719-200-77	DIODE	10E2N
D706	8-719-200-77	DIODE	10E2N
D707	8-719-200-77	DIODE	10E2N
D708	8-719-200-77	DIODE	10E2N
D709	8-719-200-77	DIODE	10E2N
D710	8-719-987-63	DIODE	1N4148M
D751	8-719-200-77	DIODE	10E2N
D752	8-719-001-79	DIODE	UZL-12H1
D753	8-719-933-41	DIODE	HZS6C3L
D754	8-719-933-36	DIODE	HZS6B1L
D756	8-719-002-48	DIODE	UZL-27H
D757	8-719-200-77	DIODE	10E2N
D758	8-719-933-41	DIODE	HZS6C3L
D801	8-719-987-63	DIODE	1N4148M
D851	8-719-301-44	LED	SEL2410E-D (PLAY)
D852	8-719-301-61	DIODE	SEL2910A-D (PAUSE)
D853	8-719-301-39	LED	SEL2210S-D (REC)

SYSTEM CONTROL

Ref. No.	Part No.	Description	Remark
D854	8-719-987-63	DIODE 1N4148M	
D855	8-719-987-63	DIODE 1N4148M	
D856	8-719-987-63	DIODE 1N4148M	
		< FUSE >	
⚠F701	1-532-285-00	FUSE, TIME-LAG (T1.25A/250V) (E)	
⚠F701	1-532-741-11	FUSE, GLASS TUBE (1.25A/125V) (US, CND)	
		< FLUORESCENT INDICATOR >	
FLT851	1-517-359-11	INDICATOR TUBE, FLUORESCENT	
		< IC >	
IC520	8-759-634-51	IC M5218AP	
IC521	8-759-634-51	IC M5218AP	
IC522	8-759-634-51	IC M5218AP	
IC523	8-759-634-51	IC M5218AP	
IC524	8-759-711-35	IC NJM4580D	
IC525	8-759-711-35	IC NJM4580D	
IC601	8-759-973-95	IC BA6219B	
IC602	8-759-822-09	IC LB1641	
IC603	8-759-505-55	IC NJM4558L	
IC751	8-759-165-85	IC PST600H-T	
IC801	8-759-331-29	IC M38172M4-133FP	
IC802	8-759-248-66	IC AT24C01-10PC	
IC851	8-759-291-05	IC M38122M2-069SP	
IC891	8-741-810-59	IC SBX1810-59	
IC901	8-759-634-51	IC M5218AP	
IC902	8-759-634-51	IC M5218AP	
		< PILOT LAMP >	
PL901	1-518-471-31	LAMP, PILOT	
PL902	1-518-471-31	LAMP, PILOT	
PL903	1-518-471-31	LAMP, PILOT	
		< TRANSISTOR >	
Q301	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q302	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q303	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q304	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q305	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q306	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q307	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q308	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q309	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q310	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q311	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q401	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q402	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q403	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q404	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q405	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q406	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q407	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q408	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q409	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q410	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q411	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q601	8-729-900-89	TRANSISTOR DTC144ES	
Q602	8-729-900-89	TRANSISTOR DTC144ES	
Q603	8-729-900-89	TRANSISTOR DTC144ES	
Q604	8-729-900-65	TRANSISTOR DTA144ES	
Q605	8-729-900-65	TRANSISTOR DTA144ES	
Q606	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q607	8-729-140-97	TRANSISTOR 2SB734-34	
Q608	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q701	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q751	8-729-209-15	TRANSISTOR 2SD2012	
Q752	8-729-209-15	TRANSISTOR 2SD2012	
Q753	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q755	8-729-140-97	TRANSISTOR 2SB734-34	
Q756	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q757	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q758	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q759	8-729-620-05	TRANSISTOR 2SC2603-EF	
Q801	8-729-900-65	TRANSISTOR DTA144ES	
Q802	8-729-900-65	TRANSISTOR DTA144ES	
Q803	8-729-900-89	TRANSISTOR DTC144ES	
Q851	8-729-900-61	TRANSISTOR DTA114ES	
Q852	8-729-900-61	TRANSISTOR DTA114ES	
Q853	8-729-900-61	TRANSISTOR DTA114ES	
Q854	8-729-900-61	TRANSISTOR DTA114ES	
Q901	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q902	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q903	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
Q904	8-729-922-37	TRANSISTOR 2SD2144S-UVW	
		< RESISTOR >	
R320	1-215-465-00	METAL 68K 1% 1/4W	
R321	1-215-448-00	METAL 13K 1% 1/4W	
R322	1-215-403-00	METAL 180 1% 1/4W	
R323	1-215-473-00	METAL 150K 1% 1/4W	
R324	1-215-471-00	METAL 120K 1% 1/4W	
R330	1-249-971-11	CARBON 100K 1% 1/4W	
R331	1-249-971-11	CARBON 100K 1% 1/4W	
R332	1-249-930-11	CARBON 2K 1% 1/4W	
R333	1-249-971-11	CARBON 100K 1% 1/4W	
R334	1-249-961-11	CARBON 39K 1% 1/4W	
R335	1-249-954-11	CARBON 20K 1% 1/4W	
R336	1-249-947-11	CARBON 10K 1% 1/4W	

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Ref. No.	Part No.	Description				Remark
R337	1-249-930-11	CARBON	2K	1%	1/4W	
R338	1-249-961-11	CARBON	39K	1%	1/4W	
R339	1-249-954-11	CARBON	20K	1%	1/4W	
R340	1-249-947-11	CARBON	10K	1%	1/4W	
R341	1-247-891-00	CARBON	330K	5%	1/4W	
R342	1-247-891-00	CARBON	330K	5%	1/4W	
R343	1-247-891-00	CARBON	330K	5%	1/4W	
R344	1-247-891-00	CARBON	330K	5%	1/4W	
R345	1-247-891-00	CARBON	330K	5%	1/4W	
R346	1-247-891-00	CARBON	330K	5%	1/4W	
R347	1-249-429-11	CARBON	10K	5%	1/4W	
R348	1-249-429-11	CARBON	10K	5%	1/4W	
R349	1-249-429-11	CARBON	10K	5%	1/4W	
R350	1-249-429-11	CARBON	10K	5%	1/4W	
R351	1-249-429-11	CARBON	10K	5%	1/4W	
R352	1-249-429-11	CARBON	10K	5%	1/4W	
R355	1-249-917-11	CARBON	560	1%	1/4W	
R356	1-249-952-11	CARBON	16K	1%	1/4W	
R357	1-249-945-11	CARBON	8.2K	1%	1/4W	
R358	1-249-937-11	CARBON	3.9K	1%	1/4W	F
R359	1-249-930-11	CARBON	2K	1%	1/4W	
R360	1-249-923-11	CARBON	1K	1%	1/4W	
R361	1-249-429-11	CARBON	10K	5%	1/4W	
R362	1-249-429-11	CARBON	10K	5%	1/4W	
R363	1-249-429-11	CARBON	10K	5%	1/4W	
R364	1-249-429-11	CARBON	10K	5%	1/4W	
R365	1-249-429-11	CARBON	10K	5%	1/4W	
R366	1-249-461-11	CARBON	18K	5%	1/4W	
R367	1-249-971-11	CARBON	100K	1%	1/4W	
R420	1-215-465-00	METAL	68K	1%	1/4W	
R421	1-215-448-00	METAL	13K	1%	1/4W	
R422	1-215-403-00	METAL	180	1%	1/4W	
R423	1-215-473-00	METAL	150K	1%	1/4W	
R424	1-215-471-00	METAL	120K	1%	1/4W	
R430	1-249-971-11	CARBON	100K	1%	1/4W	
R431	1-249-971-11	CARBON	100K	1%	1/4W	
R432	1-249-930-11	CARBON	2K	1%	1/4W	
R433	1-249-971-11	CARBON	100K	1%	1/4W	
R434	1-249-961-11	CARBON	39K	1%	1/4W	
R435	1-249-954-11	CARBON	20K	1%	1/4W	
R436	1-249-947-11	CARBON	10K	1%	1/4W	
R437	1-249-930-11	CARBON	2K	1%	1/4W	
R438	1-249-961-11	CARBON	39K	1%	1/4W	
R439	1-249-954-11	CARBON	20K	1%	1/4W	
R440	1-249-947-11	CARBON	10K	1%	1/4W	
R441	1-247-891-00	CARBON	330K	5%	1/4W	
R442	1-247-891-00	CARBON	330K	5%	1/4W	
R443	1-247-891-00	CARBON	330K	5%	1/4W	
R444	1-247-891-00	CARBON	330K	5%	1/4W	
R445	1-247-891-00	CARBON	330K	5%	1/4W	
R446	1-247-891-00	CARBON	330K	5%	1/4W	
R447	1-249-429-11	CARBON	10K	5%	1/4W	
R448	1-249-429-11	CARBON	10K	5%	1/4W	
R449	1-249-429-11	CARBON	10K	5%	1/4W	
R450	1-249-429-11	CARBON	10K	5%	1/4W	
R451	1-249-429-11	CARBON	10K	5%	1/4W	
R452	1-249-429-11	CARBON	10K	5%	1/4W	
R455	1-249-917-11	CARBON	560	1%	1/4W	
R456	1-249-952-11	CARBON	16K	1%	1/4W	
R457	1-249-945-11	CARBON	8.2K	1%	1/4W	
R458	1-249-937-11	CARBON	3.9K	1%	1/4W	F
R459	1-249-930-11	CARBON	2K	1%	1/4W	
R460	1-249-923-11	CARBON	1K	1%	1/4W	
R461	1-249-429-11	CARBON	10K	5%	1/4W	
R462	1-249-429-11	CARBON	10K	5%	1/4W	
R463	1-249-429-11	CARBON	10K	5%	1/4W	
R464	1-249-429-11	CARBON	10K	5%	1/4W	
R465	1-249-429-11	CARBON	10K	5%	1/4W	
R466	1-249-461-11	CARBON	18K	5%	1/4W	
R467	1-249-971-11	CARBON	100K	1%	1/4W	
R601	1-249-429-11	CARBON	10K	5%	1/4W	
R602	1-249-426-11	CARBON	5.6K	5%	1/4W	
R603	1-249-413-11	CARBON	470	5%	1/4W	F
R604	1-249-429-11	CARBON	10K	5%	1/4W	
R605	1-249-429-11	CARBON	10K	5%	1/4W	
⚠R606	1-212-934-00	FUSIBLE	1	5%	1/2W	F
R607	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R608	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R609	1-249-426-11	CARBON	5.6K	5%	1/4W	
R610	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R611	1-247-807-31	CARBON	100	5%	1/4W	
R612	1-249-419-11	CARBON	1.5K	5%	1/4W	F
R613	1-247-807-31	CARBON	100	5%	1/4W	
R614	1-247-807-31	CARBON	100	5%	1/4W	
R615	1-249-428-11	CARBON	8.2K	5%	1/4W	F
R616	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R617	1-249-428-11	CARBON	8.2K	5%	1/4W	F
⚠R618	1-212-954-11	FUSIBLE	6.8	5%	1/2W	F
⚠R701	1-212-863-00	FUSIBLE	18	5%	1/4W	F
R702	1-249-439-11	CARBON	68K	5%	1/4W	
R703	1-249-439-11	CARBON	68K	5%	1/4W	
R751	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R752	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R753	1-249-425-11	CARBON	4.7K	5%	1/4W	F
R754	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R755	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R756	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R757	1-249-427-11	CARBON	6.8K	5%	1/4W	F
R758	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R759	1-249-437-11	CARBON	47K	5%	1/4W	

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SYSTEM CONTROL

Ref. No.	Part No.	Description				Remark
R760	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R765	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R766	1-249-437-11	CARBON	47K	5%	1/4W	
R767	1-249-437-11	CARBON	47K	5%	1/4W	
R768	1-249-429-11	CARBON	10K	5%	1/4W	
R769	1-247-807-31	CARBON	100	5%	1/4W	
R770	1-249-441-11	CARBON	100K	5%	1/4W	
R771	1-249-441-11	CARBON	100K	5%	1/4W	
R772	1-249-417-11	CARBON	1K	5%	1/4W	F
R801	1-247-807-31	CARBON	100	5%	1/4W	
R802	1-247-807-31	CARBON	100	5%	1/4W	
R804	1-247-807-31	CARBON	100	5%	1/4W	
R805	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R806	1-249-429-11	CARBON	10K	5%	1/4W	
R807	1-249-429-11	CARBON	10K	5%	1/4W	
R808	1-247-807-31	CARBON	100	5%	1/4W	
R809	1-249-429-11	CARBON	10K	5%	1/4W	
R810	1-249-436-11	CARBON	39K	5%	1/4W	
R811	1-249-436-11	CARBON	39K	5%	1/4W	
R812	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R813	1-249-429-11	CARBON	10K	5%	1/4W	
R814	1-249-429-11	CARBON	10K	5%	1/4W	
R815	1-249-429-11	CARBON	10K	5%	1/4W	
R816	1-247-807-31	CARBON	100	5%	1/4W	
R817	1-247-807-31	CARBON	100	5%	1/4W	
R818	1-247-807-31	CARBON	100	5%	1/4W	
R819	1-247-807-31	CARBON	100	5%	1/4W	
R820	1-247-807-31	CARBON	100	5%	1/4W	
R821	1-247-807-31	CARBON	100	5%	1/4W	
R822	1-247-807-31	CARBON	100	5%	1/4W	
R823	1-247-807-31	CARBON	100	5%	1/4W	
R824	1-249-429-11	CARBON	10K	5%	1/4W	
R825	1-249-429-11	CARBON	10K	5%	1/4W	
R826	1-249-429-11	CARBON	10K	5%	1/4W	
R841	1-249-436-11	CARBON	39K	5%	1/4W	
R842	1-249-436-11	CARBON	39K	5%	1/4W	
R851	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R852	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R853	1-249-424-11	CARBON	3.9K	5%	1/4W	F
R854	1-249-428-11	CARBON	8.2K	5%	1/4W	F
R855	1-249-434-11	CARBON	27K	5%	1/4W	
R856	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R857	1-249-424-11	CARBON	3.9K	5%	1/4W	F
R858	1-249-428-11	CARBON	8.2K	5%	1/4W	F
R859	1-249-434-11	CARBON	27K	5%	1/4W	
R860	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R861	1-249-411-11	CARBON	330	5%	1/4W	
R862	1-249-409-11	CARBON	220	5%	1/4W	F
R863	1-249-409-11	CARBON	220	5%	1/4W	F
R864	1-249-429-11	CARBON	10K	5%	1/4W	
R865	1-249-429-11	CARBON	10K	5%	1/4W	
R866	1-249-429-11	CARBON	10K	5%	1/4W	
R867	1-249-429-11	CARBON	10K	5%	1/4W	
R868	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R869	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R870	1-249-421-11	CARBON	2.2K	5%	1/4W	F
R872	1-247-807-31	CARBON	100	5%	1/4W	
R875	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R876	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R877	1-249-423-11	CARBON	3.3K	5%	1/4W	F
R891	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R892	1-249-424-11	CARBON	3.9K	5%	1/4W	F
R893	1-249-428-11	CARBON	8.2K	5%	1/4W	F
R894	1-249-422-11	CARBON	2.7K	5%	1/4W	F
R895	1-249-424-11	CARBON	3.9K	5%	1/4W	F
R896	1-249-428-11	CARBON	8.2K	5%	1/4W	F
R897	1-249-429-11	CARBON	10K	5%	1/4W	
R901	1-249-433-11	CARBON	22K	5%	1/4W	
R902	1-247-856-00	CARBON	11K	5%	1/4W	
R903	1-249-397-11	CARBON	22	5%	1/4W	F
R904	1-249-406-11	CARBON	120	5%	1/4W	F
R905	1-247-856-00	CARBON	11K	5%	1/4W	
R906	1-249-433-11	CARBON	22K	5%	1/4W	
R907	1-247-860-11	CARBON	16K	5%	1/4W	
R908	1-249-397-11	CARBON	22	5%	1/4W	F
R909	1-249-406-11	CARBON	120	5%	1/4W	F
R910	1-247-860-11	CARBON	16K	5%	1/4W	
R911	1-249-433-11	CARBON	22K	5%	1/4W	
R912	1-249-432-11	CARBON	18K	5%	1/4W	
R913	1-249-397-11	CARBON	22	5%	1/4W	F
R914	1-249-406-11	CARBON	120	5%	1/4W	F
R915	1-249-432-11	CARBON	18K	5%	1/4W	
R916	1-247-887-00	CARBON	220K	5%	1/4W	
R917	1-247-887-00	CARBON	220K	5%	1/4W	
R918	1-247-887-00	CARBON	220K	5%	1/4W	
R919	1-247-807-31	CARBON	100	5%	1/4W	
R920	1-249-417-11	CARBON	1K	5%	1/4W	F
R921	1-249-437-11	CARBON	47K	5%	1/4W	
R922	1-249-438-11	CARBON	56K	5%	1/4W	
R923	1-249-438-11	CARBON	56K	5%	1/4W	
R924	1-249-428-11	CARBON	8.2K	5%	1/4W	F
R925	1-247-854-11	CARBON	9.1K	5%	1/4W	
R926	1-247-854-11	CARBON	9.1K	5%	1/4W	
R927	1-247-881-00	CARBON	120K	5%	1/4W	
R928	1-247-881-00	CARBON	120K	5%	1/4W	
R929	1-249-428-11	CARBON	8.2K	5%	1/4W	F
R930	1-247-881-00	CARBON	120K	5%	1/4W	
R931	1-247-881-00	CARBON	120K	5%	1/4W	
R932	1-249-426-11	CARBON	5.6K	5%	1/4W	
R933	1-249-430-11	CARBON	12K	5%	1/4W	

Ref. No.	Part No.	Description				Remark
R934	1-249-408-11	CARBON	180	5%	1/4W	F
R935	1-247-883-00	CARBON	150K	5%	1/4W	
R936	1-249-465-11	CARBON	47K	5%	1/4W	
R937	1-249-433-11	CARBON	22K	5%	1/4W	
		< VARIABLE RESISTOR >				
RV801	1-241-762-11	RES, ADJ, CARBON 2.2K				
RV891	1-223-266-11	RES, VAR, CARBON 10K (REC LEVEL)				
RV892	1-223-266-11	RES, VAR, CARBON 10K (REC EQ)				
RV893	1-223-266-11	RES, VAR, CARBON 10K (BIAS)				
RV904	1-241-759-21	RES, ADJ, CARBON 220				
RV905	1-241-759-21	RES, ADJ, CARBON 220				
RV906	1-241-759-21	RES, ADJ, CARBON 220				
		< SWITCH >				
⚠S701	1-572-267-51	SWITCH, PUSH (AC POWER) (1 KEY) (POWER)				
S851	1-554-303-21	SWITCH, TACTILE (RESET)				
S852	1-554-303-21	SWITCH, TACTILE (MEMORY)				
S853	1-554-303-21	SWITCH, TACTILE (OPEN/CLOSE ⏏)				
S854	1-554-303-21	SWITCH, TACTILE (STOP ■)				
S855	1-554-303-21	SWITCH, TACTILE (REW ◀◀)				
S856	1-554-303-21	SWITCH, TACTILE (FF ▶▶)				
S857	1-554-303-21	SWITCH, TACTILE (REC ●)				
S858	1-554-303-21	SWITCH, TACTILE (PLAY ▶)				
S859	1-554-303-21	SWITCH, TACTILE (PAUSE ⏸)				
S860	1-554-303-21	SWITCH, TACTILE (AMS ▷▷|)				
S861	1-554-303-21	SWITCH, TACTILE (AMS |◁◁)				
S862	1-554-303-21	SWITCH, TACTILE (REC MUTE ●)				
S863	1-572-268-11	SWITCH, SLIDE (TIMER)				
S891	1-554-303-21	SWITCH, TACTILE (MONITOR)				
S892	1-554-303-21	SWITCH, TACTILE (MPX FILTER)				
S893	1-554-303-21	SWITCH, TACTILE (HX-PRO)				
S894	1-554-303-21	SWITCH, TACTILE (CALIBRATION)				
S895	1-692-368-11	SWITCH, ROTARY (DOLBY NR)				
		< TEST PIN >				
* TP503	1-564-506-11	PLUG, CONNECTOR 3P				
* TP801	1-564-505-11	PLUG, CONNECTOR 2P				
		< VIBRATOR >				
X801	1-577-360-11	VIBRATOR, CERAMIC (6MHz)				
X851	1-577-360-11	VIBRATOR, CERAMIC (6MHz)				
		**********				
		MISCELLANEOUS				
		**********				
* 51	1-590-321-61	LEAD (WITH CONNECTOR)				
⚠52	1-569-007-11	ADAPTER, CONVERSION 2P (E)				
⚠54	1-559-583-21	CORD, POWER (US, CND)				
⚠54	1-696-027-11	CORD, POWER (E)				
* 65	1-533-213-31	HOLDER, FUSE				
D1001	8-719-980-85	DIODE SLF325C				
⚠F701	1-532-285-00	FUSE, TIME-LAG (T1.25A 250V) (E)				
⚠F701	1-532-741-11	FUSE, GLASS TUBE (1.25A 125V) (US, CND)				
FLT851	1-517-359-11	INDICATOR TUBE, FLUORESCENT				
HE501	1-543-836-11	HEAD, MAGNETIC (ERASE)				
HRP501	1-543-684-21	HEAD, MAGNETIC (RECORD/PLAYBACK)				
IC1001	8-749-920-97	IC GP2S22B				
IC1002	8-749-920-97	IC GP2S22B				
M1001	X-3356-638-1	MOTOR (REEL R) ASSY				
M1002	X-3356-604-1	MOTOR (ASSIST) ASSY				
⚠S901	1-692-155-11	SELECTOR, POWER VOLTAGE (VOLTAGE SELECTOR) (E)				
S1001	1-466-238-11	ENCODER, ROTARY				
⚠T001	1-427-832-11	TRANSFORMER, POWER (US, CND)				
⚠T001	1-427-833-11	TRANSFORMER, POWER (E)				
		**********				
		ACCESSORIES & PACKING MATERIALS				
		**********				
	1-465-314-11	REMOTE COMMANDER (RM-J701) (CND)				
	1-558-271-11	CORD, CONNECTION (AUDIO 108cm)				
⚠	1-569-007-11	ADAPTER, CONVERSION 2P (E)				
	2-181-754-01	COVER, BATTERY (for RM-J701) (CND)				
	3-759-737-11	MANUAL, INSTRUCTION (ENGLISH, FRENCH, SPANISH, PORTUGUESE) (CND, E)				
	3-759-737-21	MANUAL, INSTRUCTION (ENGLISH) (US)				
*	3-919-601-01	CUSHION				
*	3-919-604-11	INDIVIDUAL CARTON				
		**********				
		HARDWARE LIST				
		**********				
#1	7-685-871-01	SCREW +BVTT 3X6 (S)				
#2	7-685-534-19	SCREW +BTP 2.6X8 TYPE2 N-S				
#3	7-682-548-09	SCREW +BVTT 3X8 (S)				
#4	7-682-565-09	SCREW +BVTT 4X16 (S)				
#5	7-682-547-09	SCREW +BV 3X6, S TIGHT				
#6	7-685-533-19	SCREW +BTP 2.6X6 TYPE2 N-S				
#7	7-621-775-10	SCREW +B 2.6X4				
#8	7-628-253-00	SCREW +PS 2X4				
#9	7-621-255-20	SCREW +BVTT 2X4 (S)				
#10	7-621-772-10	SCREW +B 2X4				
#11	7-671-154-01	STENLESS BALL				
#12	7-685-870-01	SCREW +BVTT 3X5 (S)				
#13	7-621-772-70	SCREW +B 2X14				
#14	7-622-205-05	NUT M2 TYPE2				
#15	7-628-254-10	SCREW +PS 2.6X6				

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
#16	7-682-648-09	SCREW +PS 3X8	
#17	7-621-255-35	SCREW +BVTT 2X5 (S)	
#18	7-685-861-01	SCREW +BVTT 2.6X5 (S)	
#19	7-685-646-79	SCREW +BVTP 3X8 TYPE2 N-S (E)	

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